The Lettsomian Lectures

ON

THE CONDITIONS WHICH MODIFY THE CHARACTERS OF INFLAMMATIONS OF THE SKIN, AND THEIR INFLUENCE ON TREATMENT.

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LECTURE I.[1]

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MR. PRESIDENT AND FELLOWS,—Let me first thank you for the honour you have done me in electing me your Lettsomian Lecturer, though when I looked down the list of my distinguished predecessors I can only say that my temerity in accepting the responsibility has weighed upon me ever since I assented to do so, and all the more so, because the time afforded for the preparation of the lectures has been much curtailed by the unexpected prolongation of a previous task.

It is just about a century ago that Dr. Robert Willan was issuing in parts his work on inflammations of the skin which was published in its complete form in 1808. He was a distinguished member of this society and was the second recipient of the Fothergillian gold medal in 1790 for the outline of his plan for the arrangement and description of cutaneous diseases. Although there had been previous attempts by Lorry, Plenck, and Alibert to present the study of skin diseases in an intelligible form it is not too much to say that Willan's treatise was so far in advance of its predecessors that he may be regarded as the father of modern dermatology and that his work, from its practical character, gave the study of skin diseases an impetus which it has never lost, and it will not, I trust, therefore, be a waste of time to glance briefly at his views before I show you how the subject may be regarded at the present day. Willan looked at the matter entirely from its clinical aspect and divided inflammations of the skin into papular, scaly, vesicular, bullous, and pustular forms, the divisions depending on the most prominent clinical feature of the disease, although he was well aware that some diseases might pass from one phase to another—as papular into scaly and vesicular into pustular. For many forms of inflammation his knowledge was not sufficient to connect different phases of the same disease together and so they were given a different name which our improved knowledge has shown to be unnecessary. Willan was, in fact, the Linnæus of dermatology, and although his classification was artificial it was a very practical one, and even now we consciously or unconsciously often adopt the same division in our minds in the diagnosis of any particular case. For instance, if we have before us a vesicular eruption, if we do not at once recognise it we go over all the vesicular diseases we know of, and endeavour to fit the particular case into some known category. I do not intend to prolong the accounts of Willan's early efforts, but it was the first real attempt to analyse carefully and to arrange the skin diseases he met with according to their clinical features, and so far as actual clinical description is concerned it was so accurate that it holds good now and ever will do so. The analytical method also has been continued even to the present time, and to a more limited extent is still going on. Thus during the last ten years more than a dozen distinct clinical forms of disease have been differentiated, and necessarily labeled, and though they are for the most part very rare affections there can be no question that they are really separate forms of disease and that some, like acanthosis nigricans, which is often associated with visceral cancer, or the so-called bronze diabetes or the morbus cœruleus and chloroma, are intimately connected with general medicine.

It is not, however, these new forms of disease to which I desire to draw your attention in these lectures, but to present the other side of the picture—to show the progress which has been made in the last century and is still going on in what I may call the synthesis of disease and how our increased clinical and pathological knowledge is grouping diseases together which we had not known to be connected; and how certain processes, either separate or combined, modify the clinical features and are modified by other conditions of the individual attacked; and I shall endeavour to show that the knowledge of those processes and conditions exercises a decided influence in the successful treatment of many eruptions.

In selecting the subject of inflammations of the skin I have also been influenced by the fact that they include more than half of all skin diseases, six out of every ten patients with skin eruptions having some form of inflammation; therefore every medical man must have many cases come before him for diagnosis and treatment. In 10,000 of my hospital cases nearly 6000 were inflammations and over two-thirds of these were included under three diseases—eczema, psoriasis, and impetigo contagiosa—while five-sixths were comprised in these diseases and three others, lichen planus, erythema, and urticaria. In my private practice the total was nearly the same, but the components were in different proportions. As might be anticipated, the number of cases of contagious impetigo was small. Eczema and psoriasis still headed the list in not quite so large a proportion. Lichen planus was more than twice as frequent, while the disfiguring acnes were nearly three times the number of the hospital cases, and the erythemata and urticarias were in nearly the same proportion.

Let us first consider inflammation of the skin set up by irritants either in the course of the occupation of the individual or applied intentionally, or unintentionally, in various circumstances. Irritants, judged by the kind of dermatitis which they set up, may be divided into two classes—those which are so strong that they set up a violent inflammation in any skin exposed to their action and those of a milder character which only excite inflammation in a comparatively small number of those exposed to them, and in whom, therefore, there must be a special vulnerability, either natural or acquired. The first class are usually distinctive in so far that a practised eye can tell at once that it is an irritant dermatitis that has been present, and in many cases the actual irritant is demonstrated. Take, for instance, this drawing.[2] It is at once obvious that these vesicles all over the palm are due to an irritant. The yellow colour is due to aurantia, a yellow dye whose chemical name is hexa-nitro-phenyl-amine. It is much used for cheap yellow shoes and other leather goods. Apart from the colour, the abundant uniform-sized vesicles, thickly crowded but without any arrangement, stamp this as an artificial eruption quite different from any form of what may be called natural dermatitis. Contrast it, for example, with the similar lesions of a chronic vesicular and pustular sweat eruption of the palm or of acute pompholyx, where the large and variable size of the lesions is so different. Here, again, is a bullous and erythematous inflammation excited artificially by a girl, aged 12 years, with a strong caustic applied with a broad brush, presumably from a morbid desire to excite sympathy. The direction of the lesions, the brush marks being distinctly visible, sloping from without inwards, enables its character to be easily recognised. Then I show three burns which are quite distinctive in their characters, produced by Roentgen rays, which have this awkward peculiarity, that they produce no visible or sensory effect at the time and the inflammation may not set in for days, or even two or three weeks, after the last exposure. This is a great drawback to their therapeutic employment in which it is often necessary to go on until there is a slight visible redness which may become a sudden severe dermatitis a week or two later. In these three cases, the exposures were for radiographic diagnosis of the kidney and prolonged beyond what is necessary nowadays with improved apparatus. All the lesions were in the centre of the abdomen. Case 1 was due to an hour's exposure, and although there was some redness the next day the severer inflammation set in six days later. It took two months to heal. In the second case there were several

[1] Lectures II. and III. will be delivered on March 2nd and 16th, 1903, respectively.

[2] In the lecture drawings and plates were shown in illustration.

long exposures, and the dry black slough remained for months without alteration or separation. In the third case, healing has not been more complete than the drawing shows in six years, and this network of dilated vessels marks the original area of inflammation. The slowness of healing and this telangiectasic condition are characteristic of Roentgen ray burns and I have even seen telangiectasis produced without any antecedent inflammation. As regards the effects of milder irritatants the diagnosis in the absence of a history of exposure to such irritant may be, and often is, impossible, but if there have been repeated apparently causeless attacks, their primary effect being always on an exposed part may afford some clue. Perhaps one of the most frequent puzzles of this kind arises when amateur horticulturists get a severe dermatitis from exposure to some irritant plant of which the pretty primula obconica is the most frequent offender. I have met with several cases in which pemphigus or acute eczema has been diagnosed and internal treatment and a rigid dietary have been enjoined, of course without effect.

The vulnerability of the patient, whether natural or acquired, very often increases after each attack until a sensitiveness almost incredible may be acquired. Iodoform dermatitis, to which some surgeons as well as their patients are liable, is a familiar example and Dr. A. J. Hall of Sheffield relates a case of an analytical chemist who acquired an idiosyncrasy with regard to phenyl-hydrazin-hypochloride to such an extent that the primary local inflammation not only became general in a few hours but the minute quantity of vapour conveyed in the clothes of an assistant who visited him at his own house to report on his work on this substance was enough to excite an outbreak.

There is quite a large class of trade eczemas, either from dry or wet substances, such as those seen in bricklayers, bakers, grocers, barmaids, or French polishers, of which baker's eczema is sufficient as an example, and the point I wish to emphasise is that not only is there inflammation of the part exposed but in many of these patients a symmetrical eruption in distant parts may develop in a few days, or even hours, absolutely indistinguishable from the so-called idiopathic eczema. The outbreak is often too sudden, too widespread, and too symmetrical for the inflammation to have extended from without, and we must assume either that it is a reflex nerve disturbance of a vasomotor character or that it is due to micro-organisms multiplying first at the site of the dermatitis, then absorbed into the circulation, or that some toxin is developed and so absorbed and distributed. At all events, the result is that this inflammation of external origin cannot be logically separated by its external aspect from one primarily generated from within, and very often in the course it subsequently runs, though local inflammations which do not afterwards become general are, as a rule, readily amenable to treatment. Restricting for the moment eczema to its papulo-vesicular type we have a strange confession to make—that though eczema in its varying manifestations is the commonest of all skin diseases, constituting about one-third of all forms of eruption, and has been closely studied by physicians, both general and special, for the last 100 years, yet we are still as far from agreement as to its pathology as ever. In the discussions on eczema at the Paris Congress of 1900 the consensus of opinion undoubtedly was that in the papulo-vesicular inflammations of the skin which are universally included under eczema no specific organism could be considered as its cause and certainly not the micrococcus of Unna which was generally considered to be a modification of the common staphylococcus pyogenes albus, which is universally present in the skin, and under ordinary conditions is a harmless organism. Moreover, some of the best bacteriologists showed that eczema vesicles could and did exist in which the fluid contents were absolutely free from organisms, though, on the other hand, Galloway showed that the universal staphylococcus pyogenes albus might exist in uncomplicated and early lesions of papulo-vesicular eczema, as, indeed, it exists in the normal skin also. We must therefore conclude that these organisms are not of themselves sufficient to produce a papulo-vesicular dermatitis, but it is highly probable that given certain conditions, such as gouty or other cause of faulty assimilation, the action of an irritant on the skin in a predisposed person, a nerve shock, either purely mental, such as a great grief, worry, or anxiety, or a physical shock, such as a fall or strain, that these usually harmless organisms may become pathogenic and give rise to one of those forms of dermatitis to which we universally accord the name of eczema.

To the questions, therefore, Is eczema parasitic? Is it a blood dyscrasia? Or is it a neurosis? not only cannot an absolute answer be given as regards any one of these factors, but I believe it is not only the most cautious attitude but the one which will lead to the soundest and most successful practice if instead of tying our hands by adhering to any one theory we allow that all these factors may, and often do, have some share and that our endeavour should be to estimate what proportion these several factors may play in any particular case. If we try to do this intelligently we shall have to recognise that our patient is not a mere test tube in which we have only to neutralise the uric acid in order to cure his eczema, or that if we kill the hypothetical germ that the inflammation will forthwith cease, and still less shall we rely upon arsenic as the panacea for all cutaneous woes and find too often that while the skin irritation is as rampant as ever, we have set up a gastric irritation which may give some trouble to subdue.

While, then, it cannot be shown that any special organism can of itself produce this papulo-vesicular type of dermatitis, yet when once the process is started pus cocci, whether the staphylococcus aureus or the streptococcus pyogenes, can and do modify the form of inflammation presented to us, though it may still be included under the name of eczema. In some cases their presence is probably due to the cultivation into virulence of previously harmless organisms, in others by secondary invasion. It is this microbic influence I now propose to consider. If we compare a vesicular discharging eczema of the face and arm with a pustular form of the same regions the differences are very striking and all the superadded crusting is entirely due to the pus-cocci invasion. Impetiginous eczema, as it was formerly called, was regarded as of a severe and formidable character, and it may be so if neglected, while, on the other hand, if its nature is understood it is readily amenable to treatment planned to destroy the pus cocci, by which the inflammation may be reduced to its simpler uncomplicated character and the whole inflammatory process will sometimes be subdued. All that is necessary is to soften and to remove the crusts with carbolised oil, alkaline compresses, or boric acid starch poultices, and then to apply some such ointment as iodoform ten grains and unguentum zinci oxidi one ounce, which is only an example of a whole legion of similar applications. There is, on the other hand, a large class of inflammations of the skin and its appendages entirely due to pus cocci, with or without other organisms, of which the following is a list in tabular form according to the most modern views.

Staphylococcus aureus, albus, citreus.	Boils. Carbuncles. Coccogenic sycosis. Lupoid sycosis. Impetigo of Bockhardt and secondarily in other forms. Quinquaud's "folliculitis decalvans." Dermatitis papillaris capillitii and probably other forms of pustular folliculitis. Pemphigus neonatorum. Pemphigus contagiosus. Cutaneous abscesses. Superficial whitlows. Erysipelas. Granuloma pyogenicum and other papillary growths. Acne variioliformis seu necrotica.
Streptococcus pyogenes of Fehleisen.	Impetigo contagiosa and its varieties, including ecthyma but excepting Bockhardt's. Erysipelas. Erysipeloid. Superficial whitlows.

It is not to be inferred that this table covers the whole ground of pustular inflammations, for there are other organisms which can excite pustular lesions without the intervention of pus cocci, such as the trichophyton megalosporon, blastomyces, the tubercle bacillus, &c. It will also be observed that erysipelas may be produced by either streptococci or staphylococci, but the streptococcus of Fehleisen is the usual organism. Further, it is contended that some lesions are produced by a mixture of the staphylococcus and streptococcus. Thus it is said that impetigo contagiosa due to the streptococcus pyogenes of Fehleisen may be invaded and modified by the staphylococcus aureus, but this is still a controverted assertion and the point is of academic interest, as the line of treatment would be unaltered even if the statement is true. Many of these follicular pustules are the affection which is known as the impetigo of Bockhardt who was among the earliest to identify staphylococcus aureus as its cause. It differs from

ordinary impetigo contagiosa in being always pustular from the first and in being a folliculitis connected with the hairs, most commonly of the scalp, where it may come on either as a crop of follicular pustules or it may attack primarily or secondarily the neck, face, back, buttocks, or thighs. I have gone out of my way to describe this condition because, according to Sabouraud, it is always the precursor of boils, sometimes leads to abscesses, and secondarily invades the streptococcal form of impetigo contagiosa. Although I think Sabouraud is too sweeping in his assertions that this form of impetigo always precedes boils it is certainly a frequent concomitant and it is of great importance that it should be cured as soon as possible. As a warning not to let pustular affections alone I have seen a streptococcal impetigo following vaccination which was allowed to go on with inadequate treatment lead to a rapidly spreading erysipelas over a great part of the body, which endangered the child's life and gave as much anxiety to the medical attendant as it did to the parent.

In all these diseases the realisation of the fact that pus organisms are the *fons et origo mali* is essential to successful treatment. The local destruction as soon as possible of these organisms is the key to stopping boils and carbuncles, not only at the moment by preventing their further development, but still more in stopping the supply of future boils. Thus, subcutaneous injection of a 1 in 30 solution of carbolic acid round a carbuncle will stop its extension, while in the case of boils, if each boil is at once opened and disinfected with 1 in 40 carbolic solution, not only do the lesions heal more rapidly but in a short time fresh boils cease to appear. Consider for a moment what an immense practical gain this is. There is a definite aim in the treatment, a known organism which can be fought successfully even when the liability to boils has been going on for months or years. But to do this the lesions must be attacked at the earliest possible stage, as the pus cocci may have spread beyond the site of a fully-developed boil before it is opened. Every pustule, however small or however superficial, should be at once opened, thoroughly disinfected, and in the case of these small lesions the patient can often be instructed what to do for himself, as time is important and 24 hours' delay may cause the failure of prophylactic treatment as far as that particular boil is concerned.

I propose only to draw attention to two other of these primary pus cocci affections before I pass on to another form of dermatitis. One of these is pemphigus neonatorum. This, as its name implies, is an affection which attacks newly-born infants in the first week or two of life. It occurs in the form of blebs from one-eighth to half an inch in diameter, usually with pellucid contents, and very frequently begins about the genitals and spreads slowly or rapidly over a large area. It is sometimes mistaken for a syphilide, but it is not pustular from the first, does not especially attack the hands and feet, and the child is not as a rule cachectic; moreover, if properly treated it is benign and short in its course. For several years past Pernet, Nabarro, and others from cases in my clinique have obtained pure cultures of staphylococcus aureus both in solid and liquid media, but the streptococcus has also been found by some observers. These cases are specially frequent among the poor, where defective drains and similar unhygienic conditions prevail, and the disease was often endemic in lying-in institutions before modern antisepticism was practised. All that is usually required is to remove the child from bad surroundings and dust on freely a powder of boric acid 10 per cent. with zinc and starch. But in neglected cases or where the affection is derived from the mother who is suffering from puerperal fever a general and fatal septicæmia may result.

Another class of pus organism diseases which are not yet generally so recognised are the fungating papillary growths which are apt to form in all chronic suppurative surfaces and after some acute suppurations. They are all varieties of pyogenic granuloma, but have received different names according to the underlying conditions on which they develop. Thus there may be a papillary growth on a chronic ulcerating syphilide or a similar development on a scrofulous sore, usually called lupus papillomatosus. Another form occurs in the folds of the axillæ and groins in pemphigus vegetans. The fungation, sometimes seen in coccogenic sycosis, is entirely due, in my opinion, to pus cocci. Of late years a supposed new disease has been described and called botryomycosis hominis; veterinary surgeons first gave the name to a fungating granuloma seen after castrating various animals and it was wrongly thought to be a botryomycosis. As it occurs in man, it is usually seen after suppuration on the palmar surface of the hand and is now pretty generally acknowledged to be due to pus cocci infection and only a pedicled tumour-like exaggeration of what used to be called proud flesh. Ligature and iodoform speedily cures it, and all the conditions I have mentioned, to which may be added the granuloma inguinale tropicum and its home imitators, may also be cured on similar principles. Finally, I would add that, in my opinion, although I cannot give definite proof, hypertrophic scars such as follow burns, vaccination sometimes, and other slow-healing sores, are also the result of pus cocci invasion, and that if these organisms were excluded during the healing process no such scar thickening would result.

Thus we find the same organisms producing such divers lesions as bullæ, superficial and deep pustules, boils, carbuncles, fungating granulations and keloidal thickening of scars, and various forms of folliculitis—a very important generalisation therefore which should exercise a strong influence on our practice. Note, too, how far it takes us from Willan's morphological classification founded on primary lesions. The shape the lesions take depends on the anatomical position of these pus organisms in the skin, not on the nature of the organism itself; and even pus which is present in nearly all lesions is absent in pemphigus neonatorum. The recognition of their common origin therefore is entirely due to modern pathological research and holds out promise of still more fruit to be garnered by similar investigations in other directions.

I have shown how a local irritant on a predisposed person may excite an eczema and how the invasion of pus cocci on the dermatitis may modify it, and if they are conveyed and inoculated on to other parts of the skin the numerous and even dangerous conditions they may arouse. I wish now to direct attention to the modifications a dermatitis may undergo if it is excited on what may be called a seborrhœic basis. These are generally admitted to be of bacillary origin, but the term seborrhœa requires a little explanation as there has been a good deal of controversy about it of late years. As all know, its primary meaning is an increase of the secretion of sebaceous glands and according to the strictest interpretation only cases with an excess of oiliness of the scalp or skin come under this term, and even of this Unna and his school say that the oiliness comes from the sweat glands rather than from the sebaceous glands. This view has been strongly combated and is losing ground. Sabouraud states that seborrhœa oleosa is due to the presence of his special seborrhœic micro-bacillus in the sebaceous glands and that it is also the cause of the comedo which is a cystic formation round these micro-bacilli producing the familiar primitive fatty plug. But in addition to this excess of oiliness, which may be seen both on the face and scalp and is a source of great annoyance to the patient, a still more common condition is to see the scalp covered, more or less, with a firm fatty incrustation, varying from soft yellow wax to a scaliness of a more or less greasy character. This has also hitherto been included under the term seborrhœa and it is convenient clinically, though not quite correct to do so still. When it is scraped off the skin beneath is perfectly white, and it may go on for years without clinical signs of inflammation, nevertheless microscopically there is a dry catarrh of the skin and the firm secretion is really a mixture of fat with epithelial cells derived chiefly, if not entirely, from the horny layers of the epidermis. It is therefore a fatty pityriasis of the scalp due, it is said, to Malassez's bottle bacillus. Unna's "morococcus" is, in his opinion, the cause of both seborrhœa in its most extended sense and also of the various obviously inflammatory affections which spring from it, while Sabouraud, more correctly, I think, regards the seborrhœic micro-bacillus as the primary cause of the true seborrhœa oleosa, and considers the fatty pityriasis to be due to the combination of the bottle and seborrhœic micro-bacillus, while the secondary invasion of staphylococcus aureus or a grey coloured coccus produces various inflammations which may be included under the convenient term "seborrhœides." We need not decide whether this view is rigidly correct, the important point to remember is that the "seborrhœas," both oily and firm, are affections due to one or more micro-organisms and are not the trivial conditions they appear to be to most persons. For unless there is an active dermatitis either on the scalp or glabrous skin the patient rarely comes complaining of an oily or scurfy head, but only of the hair coming out, so

that he is threatened with baldness, and in nine cases out of ten this defluvium capillorum is the result of seborrhœa. It is not my intention to go minutely into this subject, which would require a lecture to itself, but to point out the principles of treatment which a more intelligent knowledge of the subject has suggested and of which experience has confirmed the value. In former days, not very long removed from the best of us and still existing in many medical minds, the one idea was that falling of the hair was due to debility and feeble nutrition and the universal practice was to give tonics and apply cantharides and other stimulants locally to improve the circulation. Of course, there are cases after fevers and other serious illnesses which require, or, at all events, do well with, such treatment, but they form a very small proportion of the cases, and the recognition of the microbic origin of the disease, while it should not make us neglect the investigation of the general health, should lead to the use of microbicide applications, for if the microbes are destroyed the chief obstruction to the growth of the hair is removed and the hair grows readily enough unless the follicles and papillæ are too much damaged to recover. Preliminary to this is the removal of the oily or fatty layer by means of soft-soap applications which may be combined with antiseptics such as thymol or carbolic acid. Afterwards the application of such microbicides as resorcin, sulphur, mercurials, iodine, &c., are usually successful. These are only examples of the kind of application experience has taught to be most efficacious in destroying the seborrhœic micro-bacillus, and these or similar drugs were used long before Sabouraud's observations gave a more lucid explanation of the process than had previously been afforded by Malassez's, Elliot's, or even Unna's observations.

In addition to stopping the fall of the hair and paving the way to its restoration, the cure of seborrhœa takes away what I have been insisting on as a strongly predisposing factor in the production of active inflammation of the skin, either by its own microbe taking on increased pathogenic activity or by its offering a favourable pidus for the cultivation of other germs, especially staphylococci and streptococci. This is all the more important if the patient has had previous attacks of dermatitis, either of this type or other types, as one of the places of least resistance is thus removed.

Let me give an instance, as illustrated in this plate.[2] This woman, aged 50 years, had had seborrhœic pityriasis capitis for years, with no other symptoms beyond occasional slight itching and a gradual defluvium capillorum which had left very little hair. One day she learnt that her husband, whom she imagined to be in prosperous circumstances, was a bankrupt and as one consequence a very active inflammation of the scalp supervened which is depicted here on the scalp, but her hands were also inflamed very much as in the plate, though, as a matter of fact, the drawing was not taken from her hand; further, the matrix of the nails became involved and the nails themselves became discoloured, deformed, and hypertrophied, leading to the enormous overgrowth shown in the drawing, and in every way her condition for a long time was a very unhappy one.

The seborrhœides are of two classes: (1) those which are the direct outcome of seborrhœa; and (2) those which are indirectly due to it. The direct ones imitate forms of non-seborrhœic dermatitis, but with distinct differences. One imitates eczema, but usually in a dry form, in patches which have well-defined borders, have frequently a rounded outline, sometimes definitely circular, and have especial seats of election, such as the neck, the centre of the chest and back, and the axillæ and groins, though no place can be said to be exempt. When very extensive—and it may affect nearly the whole body—it presents appearances closely resembling the pre-mycotic stage of mycosis fungoides, a formidable and fatal disease in which in the latter stages fungating tumours develop. In the early stage of this form there are always gaps of healthy skin, surrounded by a dry, finely scaly dermatitis with raised, well-defined borders, so that the normal skin has the appearance of being sunk below the general surface, though, of course, it is due to the morbid tissue being raised. The resemblance is so close that many cases of mycosis fungoides in the early stage have been diagnosed by good observers as seborrhœides, but the converse is not likely to happen, as mycosis fungoides is rare and unlikely to be thought of when an innocent-looking inflammation of a not very rare kind is apparently presented, and its absolute intractability to treatment may be the first circumstance to raise doubts as to the correctness of the diagnosis. The second or papular form is generally easily recognised by its localisation to the centre and upper part of the trunk both back and front, though occasionally it goes beyond these limits. It forms small circles of closely aggregated papules with a fawn-coloured centre and by coalescence of the component circles a very characteristic, gyrately outlined patch with brownish-yellow centre may be produced in the interscapular region. This form is interesting because it was the first inflammatory disease which was recognised by Duhring to be constantly associated with seborrhœa capitis and was called by him seborrhœa corporis long before Unna's important generalisation gave a more extended application to seborrhœic dermatitis. Though easily recognised it is often difficult to cure because while removeable for a time it has a strong tendency to recur, especially if the seborrhœa capitis is not efficiently treated, so that recrudescences should be looked out for and promptly dealt with. The third or psoriasiform seborrhœide is a fairly close imitation of psoriasis but differs in its seat of election by attacking chiefly the axillæ and trunk instead of the limbs. The patches are as a rule less definitely circular, less scaly, the scales being more often fatty and opaque instead of dry and silvery, and while both diseases attack the scalp, true psoriasis has very little effect on the hair growth, while the seborrhœide produces considerable loss of hair, associated as it always is with a general seborrhœa capitis. These patches are very little influenced by arsenic and generally yield best to a mercurial application such as the yellow oxide or ammoniated mercury ointment or to resorcin and sulphur from 10 to 20 grains to the ounce. According to Unna, psoriasis itself is a final link in the seborrhœic chain, but most dermatologists do not follow him so far as that and think that he has been led by parental fondness for the family he has done so much to create to bring too many strangers into kinship with it.

The indirectly related affections to seborrhœa are, according to Sabouraud, mixed infections—the pustular eruptions, acne varioliformis, acneic furunculosis, chronic furunculosis of the neck, sycosis, acne keloid, and dermatitis papillaris capillitii. These are all, he says, due to the secondary invasion of the staphylococcus aureus on the seborrhœic basis. Although this is not absolutely proved it may be accepted provisionally and if correct it is a nearly as important generalisation as Unna's with regard to the direct scaly seborrhœides and just as we find the pus cocci on an ordinary eczematous dermatitis profoundly modify the form of inflammation, so here the same organisms on a seborrhœic basis exercise a no less important modification of character and give rise to absolutely new forms of disease. It therefore opens to us new doors for investigation as to the clinical changes produced in other directions either as regards the primary conditions or the secondary invasion. Even if this compound origin is not absolutely true it is indisputable that pus organisms play an important rôle in these diseases and our aim in treatment must be to get rid of them.

THE LOCAL ORIGIN OF SOME GENERAL AND SYMMETRICAL ERUPTIONS.

It is obvious that when we have to do with a general and symmetrical eruption that this symmetry combined with a wide extent is a sign of its distribution having occurred from within outwards, while in diseases admittedly due to external parasites, such as impetigo contagiosa from pus cocci, or ringworm from the trichophyton, their asymmetry, and what we may call their haphazard distribution, are important features in their diagnosis. In certain diseases, however, it can be shown, sometimes with strong probability, sometimes with certainty, that while in the latter stage or in their recurrences they are widespread and symmetrical, in the primary invasion this is not the case and that they may commence on one side and remain so for a considerable time and then generalise symmetrically more or less rapidly from that. This mode of development is from a primary patch.

The primary patch.—There is a disease called pityriasis rosea to which I would call attention for a few moments. It is noteworthy because it is not very rare, but it is a disease little known to those who do not study dermatology. It may cover the whole trunk and greater part of the limbs and in cases which develop rapidly it may be accompanied with enlarged post-sterno-mastoid glands, slight congestion of the fauces, and a slight rise of temperature, while the eruption

[2] Author's Atlas, Plate lxxx.

is in many cases like the early papulo-scaly syphilide. It usually runs a course of from three to six weeks and then disappears spontaneously, but occasionally it lasts from three to four months. Its mode of development is very important; Brocq, a French dermatologist, first pointed out that it began as a single circular patch on some part of the trunk which slowly increased in size up to a shilling or rather larger, and in about ten days from its first appearance began to generalise and would often cover a large area, or even the whole body, in a few days. The explanation I would offer is that there is at first a local multiplication of microbes and then absorption takes place and rapid multiplication in the blood. I have traced the same mode of development in more chronic diseases, especially in their first attack, but not in recurrences. Thus in the first attack of psoriasis it will be observed that there are often only one or two patches on one limb; these will enlarge peripherally, generally very slowly, and may remain for weeks or months, and in some cases for years, with very little change and then gradually or rapidly the patches increase in number. When the increase is gradual the patches multiply asymmetrically and often on the same side as the original patch and on any part of the limb, but when it is rapid the multiplication is bilateral and symmetrical and in the usual seats of selection—elbows, knees, and extensor aspects generally. This suggests that in the gradual multiplication fresh patches are formed by implantation of micro-organisms from without, while in the generalised cases multiplication comes from within, the microbes or their toxins from the original patches being absorbed into the circulation. In the recurrences symmetrical and often widespread attacks occur at once and no primary patch is observed, but patients suffering from psoriasis very often have remanets from former attacks which do not trouble them and which they therefore allow to remain untreated, and from these a fresh outbreak often starts. In lichen planus a similar phenomenon can often be traced. In many cases a few chronic patches have been present for months or years and then generalisation takes place.

With regard to eczema the evidence is not quite so definite, but, as I have already pointed out, there are many instances in which a dermatitis originated by a local irritant became general in the form of a typical acute eczema. It is obvious from this that it is very important to treat the beginning of skin diseases, and it is highly probable that in those diseases which have a primary patch that not only would a generalised outbreak be prevented, but in a recurrent disease like psoriasis the complete removal of the early patches before the general system was infected might be the means of a real cure, so that recurrence would be prevented. Further, it shows the importance of impressing upon the patient that every fragment of disease should be removed, even in the recurrences, as it affords the best chance of preventing future attacks.

If I have been able to carry you along with me in the discussion of these various forms of dermatitis you will now perceive that in spite of their varied morphology there are large groups with a central pathological core, so to speak, in each group which show that the same micro-organism may produce most diverse effects according to its mode and depth of implantation and still more according to the soil in which it is planted, and whether it is on healthy or what may be called virgin soil, or whether it is superimposed on ground which has been ploughed and harrowed by antecedent morbid conditions whether produced or not by previous micro-organisms of a different character. While each different form of disease necessarily has a separate name, so that it may be docketed and arranged from a clinical point of view, the new conception of the relationship of these diseases founded on their pathology gives us a breadth of view that goes far beyond mere nomenclature and will help to acquit dermatology in its modern aspects of being a mere farrago of outlandish names. It is partly for this reason that, while pointing out illustrations of many forms of diseases more or less closely allied, I have used as few names as possible, as I wish to emphasise the importance of processes rather than names, and that the same process might in different circumstances produce very different clinical results, which seen from a correct pathological standpoint were recognisable as closely related members of the same family, which required the same principles of treatment, though possibly with modifications in each case to secure the full amount of efficiency.

In the directly seborrhœic inflammations such as the papular eczemiform or psoriasiform eruptions, sulphur, resorcin, ichthyol, and thymol play an important part, but in small quantities such as 1 per cent. in the oleates of zinc or lead ointments or a mild form of mercury such as the ammoniated or yellow oxide, 2 to 4 per cent., either singly or combined, may be rubbed in more or less vigorously according to the degree of the inflammation. When the inflammation is more intense the treatment at first is the same as for acute vesicular eczema, but one of the drugs previously mentioned can be advantageously added at a comparatively early stage. If the inflammation is one of those in which there is a good reason to believe that pus cocci are superadded to the seborrhœic micro-bacillus then means for their destruction must be adopted, but while the principles and the drugs may be the same as in pus cocci invasion of ordinary eczema we find in practice that it is more difficult to produce their complete extirpation and that the closest following up of the treatment is required to prevent recrudescences of a disease which we have often scotched but not killed. Since they are often intra follicular probably the pus cocci invasion goes deeper when the way has been prepared by the seborrhœic micro-bacillus, and it is therefore more difficult to produce their complete destruction; though frequently the removal of all the more superficially situated organisms will produce quiescence for weeks or months or even longer. This quiescence of germs when they are shut off from the air occurs in many diseases, and while it serves to account for many apparently causeless recurrences it is not always intelligible why this dormancy should sometimes last so long, as the epidermic cells are supposed to be always tending to work to the surface.

Although I have hitherto spoken only of certain external conditions affecting the skin and their treatment I do not wish it to be supposed that because modern research has revealed various micro-organisms and partially unravelled their mode of origin, invasion, and effects, we have simply to treat all these conditions by the external application of microbicides and the skin will be restored *ad integrum*—in short, that the microbe is everything and the man nothing. While I have hitherto confined my attention to this aspect of the case, I hope in my next lecture to discuss some of the conditions of the patient which influence disease and show how they may be combated.

The Harveian Lectures

ON

FIBROIDS OF THE UTERUS AND ITS LIGAMENTS CONSIDERED FROM A CLINICAL AND SURGICAL STANDPOINT.

Delivered before the Harveian Society of London on Nov. 6th, 13th, and 20th, 1902,

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LECTURE III.[1]

Delivered on Nov. 20th, 1902.

THE MANAGEMENT OF CAPSULES.

MR. PRESIDENT AND GENTLEMEN,—When a burrowing fibroid is shelled out of its capsule of broad ligament the tissues usually shrink so that little or no trimming is needed. Vessels have always to be secured on the inner or parametric surface of the capsule. Some operators allow the capsule to remain open and to drop down into Douglas's pouch after ligature of its vessels, the oozing being absorbed by the peritoneum. Mr. Knowsley Thornton[2] observes: "I have never been able to understand the great trouble taken by most abdominal surgeons to shut off stumps and raw surfaces from the peritoneum. All experience shows that if the operation be aseptic effusions of blood are much more rapidly

[1] Lectures I. and II. were published in THE LANCET of Feb. 7th (p. 360) and 14th (p. 415), 1903, respectively.

[2] Allbutt and Playfair's System of Gynæcology, article "Hysterectomy," p. 627.

and harmlessly absorbed by the peritoneum than by torn and cut cellular tissue and experience likewise teaches that adhesions to any raw surface left free on the peritoneum are very rare. Damaged surfaces, on which peritoneum remains, much more frequently adhere. If asepticity be not quite assured, it is easy to drain with a glass tube. In my opinion, it is infinitely more dangerous to shut up cut and torn tissues."

Thus spoke a surgeon of high authority on abdominal surgery, a witness of the good as well as of the evil in methods of operating and treatment now considered effete. A younger British operator teaches opposite principles and practice. Dr. William Duncan[3] wrote two years ago: "In the cases in which the tumour grows between the layers of the broad ligament, after it has been shelled out a raw cavity is left. This cavity is best treated by whipping the walls securely together from below upwards (after hæmorrhage has been stopped) by means of a continuous silk suture, and thus the necessity for drainage by a tube or by iodoform gauze is obviated." Dr. Howard Kelly[4] differs a little from Dr. Duncan. He directs that the peritoneal flaps should be sewn together over the stump after the turning in of the pedicles of the ovarian vessels, but adds that "if there is a large space left in the cellular tissue it will be best to unite the peritoneum with interrupted or mattress sutures, so that any blood which escapes from capillaries will run into the peritoneum and be absorbed instead of forming a hæmatocele."

I am not surprised to find that three operators of experience differ in their management of capsules, and I believe that the last word has not been said on the matter, or rather I do not see that any rule can apply to every case. When there is not likely to be any effusion, as in cases where the enucleation is not extensive and the capsule, consisting of little more than the two flaps of the opened-up broad ligament, shrinks to very small proportions, the turning in of everything that can be pushed under the flaps is in the highest degree advisable. Whenever I have adopted the practice, under the conditions just stated be it understood, I have noted that all went well, pulse, temperature, excretion of urine, passage of flatus, and general condition included. But this neat and surgical tucking-in practice is unsuited to cases where the capsule is deep, forming a big cavity below the two flaps of peritoneum. We know from experience that it is not very difficult to avoid mischief on the peritoneal side of the flaps whilst it is not easy to insure the patient against complications caused by prejudicial changes in the parametrium under the flaps, complications specially probable when the enucleation has been extensive. The principles of the three writers already quoted are less at variance than they appear to be at first sight. Mr. Thornton is right in teaching that the peritoneum is a better absorber of blood than the parametrium. It follows that Dr. Howard Kelly is also right in applying sutures to the flap in such a manner that the oozing blood may run out of the parametrium into the peritoneal cavity. As the surgeon in the process of enucleation makes a parametric cavity, an unnatural space, Dr. Duncan is right in his principles of closing it. His precise line of practice may, on the other hand, lead to complications.

Let us deliberately consider this question of the flaps. We may put aside all thoughts about the stump of the cervix and assume that it has been either cut away or else so treated as to secure it from hæmorrhage without risk of sloughing from unskilful application of ligatures. We have to consider at present the treatment of a big cavity left in the parametrium after enucleation. The peritoneum tolerates a great deal of handling and ligatures, though when it is damaged beyond its powers of endurance the patient is placed in great and immediate peril. The parametrium is less tolerant. It is inevitably bruised during an enucleation, and it does not bear bruising well. It tolerates foreign bodies very badly; now after hysterectomy it often has to hold clot, which is pathologically a foreign body, and it must of necessity contain ligatures which more literally come under that denomination. Hence certain complications are apt to follow hysterectomy and panhysterectomy where there has been extensive enucleation, complications seldom deadly like septic peritonitis, but often chronic and intractable, tormenting to the patient, and discreditable to the surgeon and to the operation itself. These late complications do not always appear in statistical tables. Owing to the reparative powers of the serous membrane the peritoneal flaps seldom fail to unite. Their edges begin to adhere in a few hours like the margins of the serous layer of an abdominal wound. The dangers of septic infection of the peritoneum are soon averted, usually never to return as far as the capsule is concerned; sloughing of the stump may cause it, but that complication is not under consideration. Later trouble arises from the extra-peritoneal or subperitoneal relations of the capsule. The patient often does well for a week, a month, or longer after the healing of the peritoneal wound. Then comes trouble which is usually manifested not so much by local pain as by rise of temperature. The pulse, though quick, is usually not weak and the constitutional symptoms are not so marked as the condition of the pelvic organs found on examination might lead an inexperienced observer to expect. In short, all the familiar symptoms of parametritis or pelvic cellulitis are present. The cause of the parametritis is suppuration of a hæmatocele or a phlegmon developed around an infected ligature. I have said nothing about the early bursting of a hæmatocele into the peritoneum, as that accident is rare and comes surgically under the same category as slipping of a ligature. The hæmatocele formed by the pent-up blood oozing into the parametrium tends to undergo the usual pathological changes even when big enough to rise above the pelvic brim. Soft at first, it becomes hard. Then it may be, and generally is, absorbed. Unfortunately infection is always possible during this retrogressive change; then comes fresh softening, that is to say, abscess heralded by the earlier signs of parametritis. Suppuration is also the result of infection of a ligature. This accident leads at once to parametric deposit. Hard at first, it becomes soft, but the softening sets in much earlier than in a mild case of parametritis after labour so that fluctuation can soon be detected.

Thus suppuration occurs from two causes, themselves the effect of infection. The germ must in many cases come from the intestine. When a large tumour is enucleated from the posterior layer of the mesometrium its base is often in close contact with the rectum, as I explained when I demonstrated the surgical anatomy of the broad ligament. Thus after enucleation and closure of the flaps clot and ligatures lie in damaged parametric tissue close to the bowel, perhaps on it. The abscess will burst. We know the directions in which a parametric abscess may travel before it points. As a rule it bursts into the vagina, not rarely it opens into the rectum. Rupture above the groin, common in puerperal parametritis, is unusual in these cases. Fortunately the bladder is not often involved in abscess. We know that ligatures, ugly things to get into any part of the urinary canal, seem specially prone to make their way into the vesical cavity. From what I have observed, however, this objectionable complication is usually, when it follows hysterectomy, the result of inclusion of a piece of the bladder itself in the sutures passed through the anterior flap. Hence it is, as a rule, associated with simple cases where there is no enucleation and the flaps are cut thin and too short. When extensive enucleation is necessary the flaps are big and the bladder is not likely to be transfixed by the suture needle. It is ligature silk deep down, far from the bladder and near intestine, that sets up abscess, and it is often discharged with the pus when the abscess bursts into the rectum or vagina. These suppurative changes may develop long after an uninterrupted recovery and then prove very distressing, especially if the patient be upon her travels or away from those who know the nature of the case.

I have dwelt designedly on these complications, for I cannot see how the most careful closing of a big gap in the parametrium can guarantee the patient against distant infection. Ligatures occasionally set up trouble after the simplest hysterectomy or after an uncomplicated panhysterectomy for fibroid, as in a case done abroad which I examined a few years ago. After extensive enucleation such an accident is far more probable. A continuous silk suture applied to the flaps in a simple case may work its way into the vagina; we cannot, therefore, always trust a similar suture fixing together the opposed inner or parametric surfaces of a deep capsule. Besides, in these cases, numerous ligatures have to be applied to the mouths of blood-vessels.

Of suppuration and discharging ligatures I have seen many cases which have naturally been registered as "recoveries." In one of my own patients I enucleated and closed a large capsule after carefully securing a number of vessels with

[3] The Modern Treatment of Uterine Fibroids, &c., THE LANCET, April 21st, 1900, p. 1109.

[4] Operative Gynæcology, vol. ii., p. 373.

No. 1 silk. I checked oozing as much as possible by keeping several sponges pressed down in the capsule whilst other parts of the field of operation were being attended to. The pelvic connective tissue was opened up posteriorly as far as the rectum. Parametritis set in early during the third week and an abscess burst into the vagina discharging a ligature and a small piece of sloughing tissue. In a second case I had to enucleate a fibroid outgrowth from the vesico-uterine connective tissue. Two years later two pieces of ligature which I had applied to vessels in the interior of the capsule came away—through bursting of a small abscess into the vagina. I know of similar results in the experience of others and I may here repeat that the complication may be met with after panhysterectomy when there has been free enucleation just as it is seen after supracervical hysterectomy. I am therefore inclined to think that in cases where the capsule is deep, extending far below the flaps of broad ligament, it may be better surgery to drain it than to close up the flaps. In two recent cases I thought it best to revert to this old practice, excellent when not abused. The results were satisfactory, there was no trace of parametric exudation, and the patient enjoyed perfect comfort after convalescence. There are objections to drainage, no doubt, but the practice is as under-rated at the present time as it was once, within our own memory and experience, over-rated and abused. I am not speaking of peritoneal drainage. Olshausen[5] is not far wrong when he asserts that the routine drainage of Douglas's pouch through the abdominal wound is a "fond delusion." Dr. Howard Kelly in his "Operative Gynæcology" records experiments which show at least that while the tube may possibly help germs out it certainly lets them in. With a deep capsule it is otherwise. Its edge can easily be sutured to the lower end of the abdominal wound, so that its cavity is cut off from that of the peritoneum. Then it can be drained so as to be relieved of effusions which it is ill adapted to absorb, whilst there is no danger of infection of the peritoneum. I believe that drainage is beneficial in some cases of deeply burrowing broad ligament and ovarian cysts. A bad case of fæcal fistula came under my care a few years since; it followed about two years after an enucleation by a skilful operator, whilst in a similar case in my own practice where the burrowing cyst had suppurated a sinus developed nearly a year after the operation and gave some trouble.[6] Neither case had been drained. If for any reason drainage of the capsule through the abdominal wound should appear inadvisable, a tube might be passed into the cavity through an incision made from the vagina or gauze introduced the same way. But abdominal and vaginal drainage differ surgically and therapeutically in many respects; I cannot here discuss their relative merits.

In conclusion, I beg to remind you that I am no enthusiast about drainage, having seen too much of the results of its abuse. Nor is the drainage of a capacious capsule a practice which can afford the operator much satisfaction. The tissues of the capsule often come away in sloughy fragments, and the lower end of the wound is liable to become the seat of hernia. But I know from experience that these evils which (except hernia) mostly appear whilst the patient is still under the operator's care are far less than those which not rarely make themselves manifest many months later in an undrained case, when the operation has been registered as a success and the patient has very likely passed under the care of another medical attendant. Only last June a surgeon practising in New Zealand told me that he attended in January, 1902, a patient who suffered from a sinus in the abdominal walls whence he extracted a loop of stout silk which had been applied over ten years before in the course of an abdominal operation performed by a distinguished operator now deceased. I admit that the material of the ligature ought to be considered, but time forbids me to discuss the trustworthiness of sterilised catgut and other substances.

ADHESIONS.

Fortunately for the patient and the operator adhesions are remarkably rare in uterine fibroid disease. I know no explanation of the fact. The smoothness of the surface of the myoma is not necessarily the reason. Smooth it generally is and adhesions are usually absent, but a simple ovarian cyst is smooth, yet adhesions often develop within a few months quite independently of complications such as torsion of the pedicle or peritonitis. Relative mobility has no evident share in causing adhesions, for women often go about for years with freely moveable fibroids, heavy or light, bulky or small, yet when an operation is undertaken not a trace of adhesion may be found. Out of all the series of 44 cases in my after histories already discussed, adhesions were only met with in six, but in one of these, which I will relate, the adhesion, very serious in nature, was due to an exploratory incision and in one the fibroid outgrowth was necrotic and anomalous in form. In two fatal cases I encountered very dense adhesions, but in one oöphorectomy had been performed and one had undergone an exploratory operation. Out of the six successful cases, the fibroid was pedunculated and freely moveable in one only; in that instance there was ascites as well, a complication not observed in any of the other five, or, indeed, in any other case in my series of hysterectomies. Relative fixity has no distinct relation to adhesions. In none of the above cases was there impaction in the pelvis and in several cases where that complication existed, old or recent, I found no trace of adhesions. In one of the six the tumour was practically fixed owning to partial opening up of the broad ligaments. But in no other uterine fibroid fixed by broad pelvic connexions did I encounter adhesions, nor did I find any in the cases of fibroid of the broad ligament independent of the uterus where I operated. Let me note here that in one of the cases of this form of fibroid the tumour was of enormous size, whilst in another it was a small heavy mass like a cricket-ball lying in the left mesometrium under a large multilocular ovarian cyst.

The word "cyst" turns our attention to cystic uterine fibroids. As ovarian cysts are often complicated by adhesions, we might expect, going by logic instead of by observation, that adhesions are frequent in cystic uterine fibroids, but this is contrary to my experience. A fibroid, by the way, is not truly cystic unless it includes a big cavity containing at least half a pint of fluid. The pathological dilatations of lymphatics which resemble cysts on section are not true cysts and if two or three pints of serum drain away from such a tumour after removal and section the growth is in no sense cystic, but œdematous if not necrotic. I may add here that œdema in itself is no promoter of adhesions. Of my own cases of true cystic myoma one held 25 pints of serum and weighed 10 pounds 6 ounces;[7] there was no evidence of sepsis but the patient was overworked and emaciated and had recently suffered from severe abdominal pains. Had the tumour been ovarian adhesions would almost certainly have existed. In another case the contents of the cyst were two pints of turbid red septic fluid and the patient had been laid up for two months with severe abdominal pains. Yet I did not find one single adhesion. The serre-nœud was used in both these cases.

The fact that intestinal adhesions are relatively rare is most important for us to remember and most fortunate for the patient who undergoes operation. Small intestine adhesions in a case of a large ovarian cyst are a distinct source of danger. A dense adhesion of the ileum is so serious a matter that it is often best to resect the adherent piece of gut. Intestinal adhesions to malignant ovarian tumours are specially perilous. But ovariotomy is imperative in a case of ovarian tumour. Experience shows, on the other hand, that this dangerous complication, intestinal adhesion, is rare in uterine fibroid disease, a much less certainly fatal malady than ovarian tumour, a fact to be considered in the estimation of the risks of hysterectomy for fibroids. Most assuredly a very strong factor in the good results of that operation is the rarity of this dangerous form of adhesion. Operators who report their cases should distinguish between true adhesions of the peritoneal surfaces of the intestine and tumour and the adhesion of an extra-peritoneal part of the large intestine to the surface of part of a tumour which burrows under and behind the pelvic peritoneum. The rectum is sometimes united to the tumour in this way; then it is not always easy to recognise and its longitudinal bands simulate the ureter

[5] Die Drainage in der Bauchchirurgie eine arge Täuschung ist, Veit's Handbuch der Gynäkologie, vol. ii., p. 710.

[6] Mr. Harrison Cripps agrees that such capsules may be drained, but he objects to fixing them to the abdominal wound. See Abdominal Section for Ovariotomy, St. Bartholomew's Hospital Reports, vol. xxix., p. 13. My comments on this practice will be found in a communication on the Management of True and False Capsules in Ovariotomy, Transactions of the Obstetrical Society, vol. xxxix., 1897, p. 265. Suppuration around a ligature has been known to follow the practice of letting the ovarian capsule drop.

[7] Large Cystic Myoma of the Uterus of over Twelve Years' Duration removed by Enucleation; Recovery; with notes on Cystic Fibroids, Transactions of the Royal Medical and Chirurgical Society, vol. lxxvi., 1894.

or may be taken for strands of fibrous tissue belonging to the tumour. Great care is necessary in enucleating the base of a fibroid which burrows deeply. After dividing the pelvic peritoneum too rapid or rough use of the sponge or the finger may result in damage to the rectum, whilst that portion of intestine may be badly torn if the base of the tumour be too smartly pulled up out of the pelvis. This accident is not unknown.

Parietal adhesions, the most frequent in ovarian cystic disease, are relatively very rare in cases of uterine fibroid. So much is this the fact that when the operator finds a connexion between the parietes and the tumour he must be very careful and should extend the incision higher till he finds that he can explore the upper limits of the tumour from the peritoneal cavity. For what he thinks is a dense parietal peritoneal adhesion is more likely a direct connexion between the abdominal parietes and the tumour, which lies in front of the parietal peritoneum. In this case the fibroid has burrowed under the anterior layer of the mesometrium, as I explained in my first lecture. The bladder lies drawn up on the front of the fibroid. The consequence of mistaking such a condition for an adhesion to parietal peritoneum is tearing of the bladder, an accident once pretty frequent. Fortunately, the use of the serre-nœud, otherwise objectionable, had at least one advantage, it taught us to look out for the bladder. In so doing we discovered and took into account these displacements of the parietal peritoneum. The omentum is the structure most usually adherent. When it has long been attached to the fibroid its vessels become enormously enlarged. At the same time its connective tissue often atrophies, so that two or three dilated veins and arteries run almost bare from the non-adherent upper part of the omentum on to the surface of the fibroid. I have seen a pulsating vessel one-eighth of an inch broad running for quite three inches in this manner; it formed a big loop between two points where it adhered to the surface of the tumour. These bare vessels, after all, are mainly curiosities as regards the disappearance of the connective tissue around them. The fact of their dilatation is a more serious matter. The omentum should be tied some distance above the adhesion and divided with great care. The mouths of the divided vessels should be carefully ligatured with No. 1 silk. Thrombosis of omental veins is not unknown, especially when the omentum is fat and thick ligatures are used. In one case of ovariotomy where the veins of adherent fat omentum were dilated I suspect this complication occurred; there were severe pain and rise of temperature about the second week and a tender, hard, moveable mass could be felt in the position of the omentum. All the objective and subjective symptoms subsided and the patient recovered.

Adhesions of fat omentum associated with a big omental epiplocele are very dangerous. The surgeon has to perform radical cure of hernia, formidable in the circumstances, as well as the hysterectomy. In a stout woman, aged 49 years, I had great trouble in separating the omentum from the sac and from the fundus of the fibroid as well; the vessels were very big. The tumour weighed 15 pounds 3 ounces; it was removed after application of the serre-nœud. The more modern operation would have been better but the patient did well and is now alive, seven years after the operation.

The worst case of adhesion which I ever encountered was in a case where an exploratory incision had been made just four years before I operated. From what I could make out removal of the ovaries was intended but was found impracticable. The flooding continued and the tumour at last grew very rapidly. Mr. W. H. Chamberlain of Northampton sent the patient on to me. I found that the cicatrix adhered very firmly to the fibroid. Much omentum had first to be separated; it had become firmly incorporated with the parietes, the wall of the uterus, and the cicatricial tissue between them. Unfortunately, two coils of ileum were involved in the cicatrix. I took every precaution, but both coils were unavoidably torn through all their coats. The rent was longitudinal and about an inch long in both coils. I succeeded in closing the lacerations, using a continuous No. 1 silk for the muscular coat and interrupted Lembert sutures of the same material for the peritoneum. Then I removed the tumour and observed before closing the abdominal wound that air passed freely along the repaired coils. The operation was rather severe, as after the repair of the gut I was obliged to enucleate a big subserous fibroid from the anterior part of the cervix before I could remove the main tumour. As there was a considerable amount of shock I ordered a quarter of a grain of sparteine to be administered in a beef-tea enema every three hours. There was but little sickness and flatus began to pass naturally 30 hours after the operation. Urine was secreted freely and in 48 hours the sparteine was discontinued, as the pulse became distinctly intermittent, and strychnine and digitalis were given instead. There was no trouble with the bowels and when I last heard from the patient, 15 months after the hysterectomy, she was free from any signs of intestinal obstruction. The troublesome complication and the consequent prolonging of the operation caused me all the more anxiety as the patient had a weak circulation and was subject to attacks of fainting during the period, even before much blood had been expelled. The sparteine seemed to act well, but I watched its action, as I know from experience that it is apt after a time to cause intermittence of the pulse.

In conclusion, it is certain that adhesions are rare in fibroid disease, that when they occur they are not specially associated with any particular variety of that form of tumour or with any other complication to which it is subject, that, on the other hand, they are sometimes a manifest result of previous incomplete or exploratory operations, and that they more often involve the omentum or intestines than the parietal peritoneum.

POST-OPERATIVE ILEUS.

Most writers experienced in hysterectomy record instances of this fatal complication and one has occurred in my own practice. Sometimes it is simple in character. A band of lymph connects the intestine to the stump of the uterus, the stump being in a normal condition so far as healing is concerned, then obstruction occurs, purely mechanical. Still, though Olshausen reports two such cases in his own practice,[8] I suspect that, as a rule, obstruction is more often connected with septic changes. I will not dwell on the "raw surface" question. The dangers of a raw surface on a thick ovarian pedicle have been exaggerated. The practice of sewing the edges of the pedicle over the surface with continuous or interrupted sutures is in itself not without danger. The foreign bodies used as sutures may be sources of sepsis or other evils and the distal part of the stump may slough after this process of suturing. Nor, when it does occur, is obstruction necessarily due to adhesion to the raw surface. Dangerous adhesions may be contracted by the thinnest ovarian pedicle with a very narrow raw surface, and in cases of adhesion the intestine has been found fixed to the side of the pedicle and not to its raw extremity, as in Spencer Wells's classical example.[9]

In retro-peritoneal hysterectomy there is no transfixion and therefore no distal part of the stump as in the ovarian pedicle. I must note in drawing this distinction that some operators, such as Penrose and Howard Kelly,[10] treat the ovarian pedicle without transfixion; they tie the ovarian and uterine vessels separately, leaving the membranous interval free. I believe that this practice is in many cases excellent, but it is not quite safe when the pedicle is large. In retro-peritoneal hysterectomy, I repeat, there is no distal end and in panhysterectomy there is no stump at all, but ligatures are applied to the peritoneum and to the upper part of the vagina. Obstruction is rare after both these operations for removal of the uterus. Under unfavourable conditions, however, inflammatory changes may render adhesion of intestine very possible. The uterine stump must be handled as little as possible and ligatured as little as possible, whilst the serous coat must be lightly sutured over the muscular tissue. This practice is correct for a uterine stump which cannot shrink so rapidly as an ovarian pedicle and is not transfixed by a ligature. Distal ends do not bear foreign bodies, but as I have just observed there is no distal side of a uterine stump. As to other considerations about the suture of the peritoneal layer of the flaps, I have referred to them in speaking of the management of capsules.

At all events, to return to our subject, experience shows that the ligatured and sutured hysterectomy stump fares well as a rule if the sutures and ligatures be carefully and gently applied. But Zweifel warns us that clumsy ligaturing and rough handling of the stump greatly increase the risks of

[8] Die Abdominalen Myoma-Operationen. Veit: Handbuch der Gynäkologie, vol. ii., p. 759. Olshausen adds two interesting cases of ileus after ovariotomy (pp. 760, 761).

[9] Ovarian and Uterine Tumours, 1882, pp. 426, 427. The coil of intestine almost surrounded the sides of the pedicle.

[10] Gynæcological Surgery, vol. ii., pp. 24, 25.

exudation and consequent intestinal adhesion.[11] Unfortunately, certain stumps cannot bear the most gentle handling, whilst the patient's reparative powers are often at a low ebb owing to anæmia from hæmorrhage or visceral complications. Hence a certain amount of parametritis is observed in many cases after the removal of a big bleeding fibroid from a sickly woman and exudation, not easy to define by clinical research, probably occurs in such cases along the line of peritoneal suture. Such changes favour adhesions.

I will now record the only instance in my own experience of ileus after hysterectomy and the observations which I have just made will serve to explain how it developed.

The patient was a single woman, aged 36 years, subject to great pain in the left iliac fossa for over a year. There had been no hæmorrhages but her health was very feeble. The pain was caused by the presence of a large fibroid which filled the left side of the pelvis, extending a little above the brim. The growth sprang from the cervix, pushing up the uterus; the sigmoid flexure ran on its surface. There were other fibroid outgrowths, including one in the ovarian ligament, described elsewhere. Enucleation proved difficult as the cervical growth was bilobed and one lobe lay deep down in the parametrium. The capsule, made up of the left broad ligament, required many ligatures as did the thick uterine stump. The right appendages were left behind. This operation was performed on Dec. 10th, 1901. Evidence of sepsis, of uncertain origin, set in within a few days and obstruction came on gradually. The point of importance and interest in the after-history of this case was the difficulty of diagnosis of pseudo-ileus from true intestinal obstruction. The pulse grew very rapid and weak, and yet flatus passed freely. I feared, however, bacillus coli infection where flatus often passes even when the patient is moribund.[12] On the ninth day a great quantity of liquid fæces was brought away by the aid of turpentine enemata and the distension subsided. Within 24 hours, however, vomiting set in and I found that it was distinctly fæcal. Without delay I performed an abdominal section on Dec. 19th. Notwithstanding the septic symptoms and the feebleness of the patient the abdominal wound was firmly united. The obstruction was far above the sigmoid flexure; it consisted of a volvulus of the small intestine and immediately below it a knuckle of ileum adhered to the right side of the stump of the uterus. The small intestine was deeply congested, its coils adhered, and there was turbid red serum in the peritoneal cavity. I flushed out the peritoneal cavity with saline solution after setting free the adherent ileum. Unfortunately, the patient never rallied from the shock of the operation and died two hours after being returned to bed. There was a sloughy appearance about the stump of the cervix at the point of adhesion. This accounted for certain unfavourable symptoms seen during the first week—bad pulse, high temperature, and an unfavourable aspect. Pseudo-ileus is a common complication of septicæmia and so I was deceived by the manifest septic symptoms. The vomiting, fæcal from the first, came on late. I operated immediately after detecting it, but the patient was by that time in a very unfavourable condition.

In uncomplicated acute mechanical obstruction, as in Olshausen's cases, the symptoms are as a rule quite clear. The more or less acute pain and the characteristic vomiting, accompanied by quick pulse but no elevation of temperature, are very different from the combination of symptoms characteristic of the pseudo-ileus of septicæmia and septic peritonitis. The surgeon is not likely to delay opening the abdomen in an acute case. On the other hand, the more I see of complicated cases the less sure do I feel about pseudo-ileus and about the prophylaxis of intestinal obstruction in general. Secondary operations for obstruction where there is fever and where passive distension has been distinct before vomiting sets in are highly unsuccessful. Treatment by turpentine enemata, nutrient enemata, the wearing of the rectal tube for about 20 minutes before each enema, and judicious stimulation have saved numerous cases of passive distension with irregular vomiting and fever. When, as in my case, this condition masks distinct mechanical obstruction it is often very hard for the surgeon to decide what to do. Promptness in operating is the essential in acute obstruction. Deliberation and certain therapeutic appliances are the essentials in pseudo-ileus. But we may be much embarrassed by a mixed case. Lastly, there is no absolute prophylaxis against mechanical obstruction. The ovarian stump, the uterine stump, and the ligatured ridge of peritoneum left in the floor of the pelvis after panhysterectomy may all be the seat of adhesion. Even when unnatural prominences may be reduced by surgical ingenuity to a minimum, which we have certainly not yet attained, still the danger of acute obstruction will not even then be passed. Irritated serous surfaces and above all omentum always tend to adhere to what is next to them, and occasionally they fix themselves in such a way as to insure trouble with adjacent intestine. In one case of fatal obstruction after removal of inflamed appendages I found a coil of ileum twisted tightly around a tense cord of omentum which adhered to the fundus of the uterus. The appendages had been removed a week previously. In opening the abdomen in cases where others have already operated I have repeatedly found omentum adherent in all directions and not rarely full of holes, and I have come across small intestine hanging from the parietes, sometimes with a little diverticulum due to dragging on the adhesion. Yet in these cases there was no history of obstruction. What I have seen, others I find have observed also, and when we say that obstruction is remarkable it is really its rarity that is the feature most worthy of remark. After hysterectomy obstruction seems relatively rarer than after ovariotomy, but statistics are not quite clear as to this point. Oöphorectomy for inflammatory disease is more liable to be followed by this complication owing, I suspect, to the unhealthiness of the stump, it being never free from inflammatory elements. Removal of normal ovaries for checking the growth or bleeding of fibroids is said to be often followed by obstruction, as the stump of the pedicle projects from the surface of a firm fibroid tumour usually more or less fixed and thus may lie in contact with the same coil of intestine for days. This theoretical explanation is plausible, yet though we very often performed this operation at the Samaritan Hospital ten years ago, and not always with perfect success as to its aim, I cannot trace one case where obstruction occurred. I know of one instance of acute obstruction following several months after retro-peritoneal hysterectomy and it was successfully relieved by the original operator. But it seems certain that this grave complication is rare after hysterectomy. The stump sinks down into the pelvis and undergoes atrophy. After an ovariotomy the uterus drags on the stump of the pedicle which stands up in the middle of the pelvis in a position more favourable for contracting adhesions.

RUPTURE AND HERNIA OF THE ABDOMINAL WOUND.

One of the disadvantages of extra-peritoneal hysterectomy with the application of the serre-nœud was the frequency of infection of the abdominal wound. The process of cicatrisation was thereby much impeded and yielding of the wound followed by prolapse of coils of intestine was not rare. This complication is even more dangerous than it is inconvenient in such circumstances. When sepsis has played no share in the accident it is otherwise, for when a weak but uninfected wound yields intestine may come out and even lie in folds of dirty underlinen for hours before reduction without fatal results.[13] In the retro-peritoneal operation and in panhysterectomy rupture of the wound from septic influences is almost unknown. So many of us perform hysterectomies and are obliged to make long incisions, often in subjects weakened by anæmia, that we must think about the strength of the cicatrix and the risks of the development of hernia. Experience shows that the cicatrix is usually strong enough not to yield and to allow the bowels to prolapse, provided that the sutures, if meant to be removed, are not taken away too early, or if left are strong enough to hold the structures around the wound firmly till the cicatricial tissue is enough organised to do so. The constitution and the habits of the patient are two ever uncertain factors. I cannot dwell on the relative merits of a single row of interrupted sutures including all layers of parietes, and of sunken sutures absorbable or unabsorbable, continuous or interrupted, uniting the layers separately. Different surgeons

[11] Referate über die Behandlung der Myome, Centralblatt für Gynäkologie, 1899, p. 613.

[12] See Vautrin's valuable article on Colibacillary Infection after Hysterectomy, Revue de Gynécologie et de Chirurgie Abdominale, November-December, 1901.

[13] Cestan: Quatre cas d'Evisceration Post-opératoire Spontanée, Toulouse Médical, Nov. 1st, 1900, p. 249. A case where prolapse of a foot of small intestine through a gauze drainage-track occurred on the ninth day with no evil results is recorded in my article on Chronic Serous Perimetritis simulating Cyst of the Ovary, &c., Journal of Obstetrics and Gynæcology of the British Empire, vol. i., p. 265.

of like authority and experience are by no means agreed about this question. In some cases I find that very bad hernial protrusions follow the older and simpler method, but as I pointed out many years ago the complication is often the result of taking up too much of the peritoneum so that two opposed layers of serous membrane project forwards between the more superficial structures, effectually preventing their union. A hernial pouch is easily developed in this manner.

On the other hand, hernia of the cicatrix is by no means unknown after suture of the parietes in layers. More than one operator of experience has found out that truth. Septic changes may occur around a sunken unabsorbable ligature, the patient feels a little pain some time after the operation, and an abscess forms, leaving a weak spot. I have observed this complication twice in cases where I had been the operator and another instance is recorded where a patient was admitted into hospital for a stitch abscess a year after ovariotomy by a distinguished authority.[14] There is, on the other hand, evidence that catgut is too soon absorbed to allow of firm union, excepting some samples of chromicised gut which are very slowly absorbed and thus have the disadvantages of wire and silkworm-gut. My suspicions are confirmed by three cases recently reported by M. Recours of Bordeaux in an instructive thesis based on 62 cases of rupture of the wound and prolapse of intestine.[15] Three cases are included where rupture occurred in the practice of one surgeon and they are worth considering for a minute or two, since where three wounds yield during convalescence and allow intestine to prolapse, many more sutured in the same manner must be so weak as to become inevitably the seat of rupture. In all three cases catgut was applied to the muscular layer and horsehair to the integuments. The first patient was a man, aged 58 years; he underwent pyloro-gastrectomy for cancer. The wound yielded on the ninth day, but healed after it was sutured again, as happened in the two other cases. The second patient was a man, aged 50 years, with chronic catarrh; the wound gave way on the twelfth day after gastrostomy. The third case directly concerns us. The patient was a woman, aged 50 years, subject to uterine fibroid. She was cachectic, presumably from anæmia. Panhysterectomy was performed; the wound gave way, apparently without any violent effort, on the tenth day. Thus Recours rightly concludes that catgut, which is absorbed, or at least becomes practically useless within a week, will not allow time when the patient is feeble for the development of cicatricial tissue strong enough to bear by itself abdominal pressure increased by coughing or voluntary muscular efforts.

Into the statistics of hernia of the abdominal wound after hysterectomy I do not propose to enter, as I know not of any on which we may rely. In the operative results of one surgeon the latest cases fare nearly always the best, as he was most experienced when he performed his later operations and a life saved is a clear success directly after fair and evident convalescence. But it is otherwise when the strength of the cicatrix has alone to be taken into account. In 100 successful abdominal sections performed within 12 months there may be no case of hernia of the cicatrix, or rather no case where that complication has become advanced enough to be detected by the patient. But three years later there will assuredly be more than one hernia in the series.

CANCER OF THE STUMP OF THE CERVIX; THE ALLEGED MALIGNANT FIBROID.

Most of the subjects discussed in this lecture are illustrated by cases in my own experience. I am glad to say that I have never observed cancerous degeneration of the stump after retro-peritoneal hysterectomy in my own practice. Thus I am compelled to depart from the rule which I have endeavoured to maintain in respect to other matters of interest pertaining to uterine fibroids and their treatment. On the other hand, whilst I have refrained from speaking of subjects which happen never to have come under my personal observation, I feel bound to make an exception in regard to malignant changes in the cervix. Whilst I advocate a certain operation I am not justified in turning my back on the fact that others have shown that it is sometimes followed by evil results. Therefore, in respect to cancer of the cervix I feel bound to review the experience of others. In the first case we must make sure of the nature of these degenerations of the cervix. Is the "cancerous" stump always carcinomatous? On looking into the literature of the subject I find that sarcoma of the stump has been mixed up with carcinoma. This is a grave error. In speaking about fibroids, as I have already endeavoured to explain, pathology need not trouble us much, as we take it for granted that the tumour is a fibro-myoma. When there is a question of malignancy the case is completely altered. Sarcoma of the cervix is a very rare disease, so is sarcoma of the uterus, but it is not always easy to recognise sarcomatous degeneration of the uterus, so that sarcoma of the stump after hysterectomy may imply that there were sarcomatous elements in the entire uterus when it was amputated. Cancer of the cervix is very common and if it develops after hysterectomy can we be always certain that the germs of the disease were not present before the operation? Can we be certain that the operation caused the cancerous degeneration? Lastly, may not any method of operating which insures as much as possible the maintenance of the nutrition of the stump favour, on that very account, the development of cancer? Or does the truth lie in the opposite direction—that is to say, may not a method which insures ultimate atrophy of the stump favour malignant degeneration?

I will first dispose of the cases of sarcoma of the stump which have been mixed up with the carcinomas. I have found three distinct cases, but in the first let it be remembered that the uterus was removed by the old extra-peritoneal operation. It is recorded by Wehmer.[16] The tumour was a fibro-myoma weighing 16 pounds and the patient was 44 years of age. Now let us mark that sarcoma developed a few months later in the *scar* and rapidly diffused itself over the peritoneum. It is not clear how far the cervix was involved and the malignant disease might well have originated in the parietes adjacent to the stump. The second case is reported by Menge.[17] Sarcoma developed in the stump after removal of a cystic fibro-myoma of the uterus 11 pounds in weight. But he admits that the uterine tumour was registered as an "innocent" fibroid on the strength of its naked-eye appearances ("*grossanatomisches Aussehen*"). Hence Menge had his doubts. The third case of sarcoma of the stump was related by Dr. Stone of Washington in a discussion to which I shall presently refer. The sarcoma was discovered in time before the patient left hospital; this fact is sufficient to show that the uterine tumour was in all probability sarcomatous. The cervix was subsequently removed with success.

Thus there are three fairly reliable cases of "cancer" of the stump which were really sarcomata. We cannot feel sure that others described as "cancer" were not also sarcomata. In one of the three cases actually recognised as sarcoma the modern retro-peritoneal operation was not performed and the sarcoma may have originated in the parietes; in the second there was no microscopic examination of the uterus when it was removed; whilst in the third the probability that the uterus itself was sarcomatous is extremely strong. We cannot dismiss these cases of sarcoma without dwelling a little on malignant degeneration of fibroids, though a full discussion of that grave subject would here be quite out of place. Continental authorities claim to have discovered that sarcomatous change in a fibroid is not rare, but they rely much more on microscopical appearances than on clinical histories. Thus as long ago as in 1888 Martin detected four cases in a series of 205 operations for the removal of fibroids of the body of the uterus.[18] As recently as last March Ulesko-Stroganowa declared that she found that ten out of 100 cases of fibroid examined by her were malignant, a proportion utterly at variance with clinical experience.[19] She makes out that this "malignant" fibroid is a true leiomyoma, like any other fibroid, the muscle cells altering their form until they become polymorphic, yet in all cases the polymorphic cells can be traced back to plain muscle. The tumour which I described in 1889 was probably of this class.[20] Never since that date

[14] Transactions of the Obstetrical Society, vol. xliv., 1902, p. 183.

[15] De l'Eviscération Post-opératoire Spontanée, Thèse de Bordeaux, 1901. See cases 55, 56, and 57, p. 62.

[16] Beitrag zur Myomotomie und Castration bei Fibromen, Zeitschrift für Geburtshülfe und Gynäkologie, vol. xiv., p. 106, Case 17.

[17] Ueber zwei Fälle von Myosarcoma Uteri Lymphangiecticum, Centralblatt für Gynäkologie, 1895, p. 453.

[18] Centralblatt für Gynäkologie, 1888, p. 389.

[19] Ueber bösartiges Myom der Gebärmutter, in report of a meeting of the Russian Obstetrical and Gynæcological Society, Monatsschrift für Geburtshülfe und Gynäkologie, September, 1902, p. 427, and October, p. 826.

[20] Myoma of the Uterus becoming Sarcomatous, Transactions of the Pathological Society, vol. xli., 1890, p. 206. My conclusions (ibid., p. 212) practically signify that the tumour in question was a malignant myoma developed from the elements of plain muscle cells which had never advanced beyond their embryonic stage.

have I come across a true malignant fibroid and I regret to say that I was unable to trace the patient in that solitary case after her convalescence. I cannot find many records of malignant fibroid in the United Kingdom, though the attention of the medical world has been so much turned towards uterine tumours of late years. Nor do the foreign observers furnish us with after histories of their cases. It seems clear that in most instances the tumours of the kind described by Ulesko-Stroganowa are clinically innocent and that the changes in the muscle cells, formidable in appearance, are not malignant after all. Many of her colleagues were of that opinion when she discussed her researches before a society.[21] Dr. Lockyer, to whom I am indebted for his careful examination and preparation of many of the specimens which illustrate these lectures, has recently turned my attention to an example of "malignant fibroid" which he intends to report in full. Most unfortunately the patient died after the operation, which was performed by an experienced surgeon. Two points of interest must be noted in respect to this case. Firstly, the tumour consists of large well-circumscribed growths, purely sarcomatous in the midst of a pure myoma, so that it is not certain that it corresponds with Ulesko-Stroganowa's cases. Secondly, what is yet more important for our purpose, I cannot see how the operator could have taken the fibroid for a malignant growth. Had the patient lived of course malignancy would soon have been manifest in the remains of the cervix. But then the case would have been an argument, I admit, in favour of panhysterectomy, but not an example of malignant disease developing in a stump of which the tissues were healthy at the date of the hysterectomy. I turned attention to this source of fallacy in relating Menge and Stone's case. The same must be said of Dr. Herbert Spencer's cases read at the Manchester meeting of the British Medical Association last August.[22] In two cases of retro-peritoneal hysterectomy the tumours were indistinguishable from fibroids and were not known to be sarcomata until some months after removal; the patients ultimately died with secondary masses in the pelvis. This experience is no doubt a plea in favour of panhysterectomy, but there was no sarcomatous degeneration of the stump of a previously healthy cervix. It is remarkable that one operator should have had two cases of so rare a disease as sarcoma of the uterus with full clinical proof of malignancy within a very few years.

Thus there is such a thing as malignant fibroid and it must be taken into account in association with degeneration of the stump. We must further grant that a malignant fibroid is a sarcoma. Cancer of the fibroid uterus means carcinoma of the uterus coincident with a myoma, a grave complication to be duly borne in mind in association with the carcinoma of the stump which we must now consider, but a "cancerous fibroid" is not clinically any more than pathologically the same thing as a true sarcoma of the uterus developed from muscle cells or their elements.

Having duly weighed all these considerations about sarcoma, we are at length free to discuss cancer of the stump of the cervix, true carcinoma, which has undoubtedly been observed after retro-peritoneal hysterectomy. The most interesting summaries of clinical evidence which have recently appeared are to be found in Thumim's monograph on the operative surgery of the gravid uterus[23] and in a discussion held this year at the annual meeting of the American Gynæcological Society on the Relative Advantages of Complete and Partial Hysterectomy.[24] Thumim considers that the 15 reported cases of malignant degeneration of the stump are arguments against retro-peritoneal hysterectomy and favour panhysterectomy. But he includes the two sarcomas (Wehmer and Menge) which we have put aside and candidly admits that in two of the cases of carcinoma malignant degeneration of the cervix possibly existed when the uterus was removed. One of the doubtful cases was in Freund's practice, the second was reported by von Erlach in a discussion on Savor's case, to which I shall presently refer. Von Erlach, like Menge in his report on the sarcoma, was not sure that there was not cancer at the time of the hysterectomy; the uterine tumour was necrotic and was not carefully examined. I think that another case, included in Thumim's series of 15, is more than doubtful in the same respect. Schenk[25] is the reporter. The patient, I find on referring to the original report, was 57 years of age, and the uterus, as big as a fist through the growth of a tumour, was removed on account of bleeding for two months, with pain and emaciation. The operation was performed in December, 1897; sanious discharge was soon observed and in April, 1898, the stump of the cervix was found to be cancerous. The patient died four months later. Comment would be superfluous on such a case. Savor's case[26] is nearly as suspicious. The patient was 48 years of age when the uterus was amputated and the cancerous stump was taken away when she was 52 years old. The germs of cancer very probably existed at the time when this elderly patient underwent the operation. Thumim quite justly turns his reader's attention to a case where Landau removed a fibroid uterus by panhysterectomy from a woman, aged 44 years. When the uterus was examined after the operation cancer of the cervix was detected, a complication which had not been previously recognised. Had the cervix been left blame would have been attached to the "incomplete operation." All these cases show that statistics are misleading and when the disease develops in the cervix after the operation there is no clear evidence that the operation was the cause of the cancer. I speak elsewhere of a case in Martin's statistics where cancer of the cervix developed after double ovariotomy for tumours of an innocent type. Nobody would consider that the ovariotomy caused the cancer of the cervix.

The discussion in America to which I referred is worth attention. Noble, Cushing, and Janvrin considered that malignant degeneration was very rare. Cushing distinctly stated that the cervix has a certain physiological function of its own that is of value and on that account it should not be removed when hysterectomy is performed on a young woman. This consideration is much more important, in Cushing's opinion, than the ultimate chance of cancer developing in the stump. His theory appears related to Abel-Zweifel's which I took into consideration when speaking of the treatment of the ovaries in hysterectomy, but the German authorities insist on a retention of a piece of the uterine mucosa above the level of the os internum. Cushing is silent about this qualification and, as I have already stated, American operators amputate the cervix below the os. Noble of Philadelphia has observed cancer of the cervix in only one out of 300 hysterectomies in his own practice and in that case it was present before the operation. The case of sarcoma of the cervix recorded by Dr. Stone of Washington has been already mentioned. It is clear that when part of the cervix is left that part may become cancerous, but this complication is rare and there is no evidence that the operation causes it. So far the advocates of panhysterectomy may make use of the complication in question, but there are other considerations which favour the supra-cervical operation. On these, however, it is not to the point for me to dwell.

The last consideration relative to malignant changes in the stump is of considerable interest. Such changes, it is evident, occur occasionally. May not any method of operating devised to maintain the nutrition of the stump favour on that very account the development of cancer? I refer, of course, to the preservation of the ovaries in hysterectomy, a subject which I have already discussed at considerable length. Or does the truth lie in the opposite direction? That is to say, does an atrophic stump of the cervix tend to become carcinomatous, just as cancer usually develops in the cervix when the uterus is becoming sexually aged? The truth remains unknown. The maintenance or the limitation of the nutrition of the stump must play a part in the development of cancer, but as to which condition favours, and which tends to avert, malignant changes we know nothing. We saw that there is great uncertainty as to the effect of removing or leaving the ovaries in any one case of hysterectomy. We also saw that observers do not agree as to the effect of

[21] Loc. cit., October, p. 826. Fenomenoff considered her percentage of malignant cases too high. Levinovitch remarked that young plain muscle cell was hard to distinguish from connective tissue new growth. Redlich was of a similar opinion. Ratschinsky remarked that in one case reported by Ulesko-Stroganowa as malignant there was no evidence of malignancy outside microscopical appearances. See also discussion in the Transactions of the Obstetrical Society of London, vol. xli., 1899, p. 369.

[22] Total Abdominal Hysterectomy (especially by Doyen's Method) for Fibro-Myoma Uteri, Brit. Med. Jour., Oct. 11th, 1902, p. 1131.

[23] Chirurgische Eingriffe bei Myomen der Gebärmutter und Schwangerschaft und Geburt, Archiv für Gynäkologie, vol. lxiv., p. 457.

[24] American Journal of Obstetrics, August, 1902, p. 265.

[25] Ueber Dauererfolge nach Myomotomie, Archiv für Gynäkologie, vol. lxii., p. 460 (Case 18).

[26] Carcinoma cervicis nach Laparo-myomektomie, Centralblatt für Gynäkologie, 1898, p. 1367.

leaving or removing part of the uterine body as well as the cervix. In short, we are far too ignorant about essential points to be able to solve this question. There must be a solution, but at present we lack even bare clinical evidence. We know that the preservation of the ovaries in hysterectomy, as a rule at least, favours the continuation of a modified menstruation and as a rule softens the artificial menopause. Unfortunately I find that in the records of carcinoma of the stump the treatment of the ovaries is seldom if ever noted. None of the authors lay any stress on the matter. I have only succeeded in obtaining evidence about the ovaries in two cases, both recorded this year by M. R. Condamin of Lyons.[27] That writer, like his predecessors, makes no mention of the ovaries, but he kindly took the trouble to reply to a letter which I wrote to him asking for the necessary information. He stated that at the time when he operated on the two patients he always left at least one ovary. The evidence of two cases, however, is insufficient, especially in one instance, for the first patient was 58 years old and malignant disease appeared as a bleeding fungous mass in the stump a year after the hysterectomy. It might well have existed at the time of the operation. The second patient was 40 years of age and the malignant changes in the stump were detected by accident four years after the hysterectomy during an operation for hernia of the abdominal cicatrix. Pain, hæmorrhages, and fatal cachexia quickly followed. Thus it is clear that we want more light thrown on this question. Let all operators faithfully record the treatment of the ovaries and the nature of the uterine flaps in every case of hysterectomy for fibroid disease. If there be clearly any distinct advantage in one line of treatment—I mean clear evidence of relative immunity from malignant changes—let us adopt that treatment, for there is great weight in Cushing's argument in favour of retaining the stump of the cervix; but if no method of treatment secures the cervix from degeneration, and if better evidence than is at present at our disposal can establish a causal relation of the preservation of the cervix to its malignant degeneration, then we may seriously think about adopting panhysterectomy to the exclusion of the less complete operation.

DANGER OF PUSHING A FIBROID OUT OF THE PELVIS.

Pushing up an impacted fibroid is never a thoroughly safe proceeding. It is specially dangerous during pregnancy, and we must remember that that condition may be overlooked in a young woman where metrorrhagia is present and simulates menstruation. The impacted fibroid is usually firmer than the gravid part of the uterus and not rarely very much harder; the danger of pushing a hard against a soft mass is evident. I exhibit a very instructive preparation; it was a fibroid uterus which I removed during pregnancy. Some of you have seen it before; the full history is published in THE LANCET[28] and there is a fine engraving of it in the forty-third volume of the Transactions of the Obstetrical Society (p. 178). I watched the development of the pregnancy for over six weeks. The lower mass became fixed in the pelvis. Reduction would have been very dangerous. Observe the soft uterus, once containing a fair amount of liquor amnii. The mass beneath it is extremely hard, the growth above it is at least much harder than its own tissue. It lies like an orange between two stones. As the impacted mass caused pressure symptoms, so that it was inadvisable to wait till term and do a Cæsarean section, I removed the uterus.

I know that a hard mass in the pelvis associated with a pregnant uterus is naturally supposed to be a fibroid and when impaction is threatened many practitioners try to push the mass out of the pelvis. Experience, however, teaches us that a small tense ovarian cyst pressed down into the pelvis may feel very hard when the hand contrasts it with the soft pregnant uterus. This fact must be remembered, as rupture of an ovarian cyst in pregnancy is serious. I exhibit a cyst from a case in point which I recorded in full[29] last spring. Before the pregnancy the patient had noticed no symptoms of any tumour, attacks of severe pain set in during the fourth month, and on examination a mass was found occupying Douglas's pouch and the left fornix. It seemed absolutely fixed and was very firm; but owing to its position under and behind the pregnant uterus satisfactory bimanual palpation was not practicable, even under an anæsthetic. Gentle attempts to push it up were made under chloroform. Several of my colleagues at the Samaritan Hospital examined the patient with me on that occasion and we all agreed that the firm tumour was probably ovarian, yet possibly might be a fibroid, as in the other case. We were certainly prudent in avoiding firm or continuous pressure. I made an exploratory incision and found on raising the uterus out of the abdominal wound that the tumour was a small pyriform cyst of the right ovary displaced backwards and entirely to the left. It was jammed in the pelvis behind the uterus. Its pedicle, twisted two turns, was stretched tightly across the back of the uterus. The left ovary lay both above its fellow and above the pelvic brim. The cyst was removed with the greatest ease; I operated in the fifth month and the pregnancy went on to term. I think that these two specimens are a good object lesson, teaching us the perils of trying to push a firm tumour out of the pelvis during pregnancy. I was careful about handling the pelvic swellings and so the patients were preserved as well as the specimens.

In concluding these remarks about pushing up pelvic tumours during pregnancy I must once more insist on the difficulty of diagnosis in these cases where the tumour can seldom be explored bimanually. A swelling resembling a cystic fibroid might prove to be a hydatid cyst. Franta, who has written a valuable monograph on hydatid cysts in pregnancy, labour, and the puerperium,[30] notes that only in one recorded case could the cyst be successfully pushed up above the pelvis during labour. I doubt if anybody would care to push up a hydatid cyst, if he had diagnosed it, in any circumstances. Great care must also be taken when attempts are made to push up a fibroid even when the uterus is evidently not gravid. The fact of impaction is only certain when the operator knows on very reliable evidence that the mass fixed in the pelvis was recently free and moveable. Pushing a broad ligament fibroid might entail serious consequences.

In conclusion, Mr. President and Gentlemen, I must heartily thank you for the patience with which you have listened to me. I have endeavoured to turn attention to several unsolved factors relating to fibroid disease and have dwelt on two themes which many of us believed to be defunct until it was shown last summer that they were only in a state of suspended animation. You will now understand why I have avoided disquisitions on the innocence of fibroids, the necessity for surgical interference, and the best kind of operation. These matters have been freely discussed of late by able advocates and opponents, so freely that I understand that the profession is getting tired of discussions which are not likely to lead to any solution. I must specially thank my friend and colleague, Dr. Cuthbert Lockyer, for the pains which he has taken to prepare a number of specimens which I have used during these lectures for purposes of demonstration.

[27] De la Transformation Néoplasique du Moignon Utérin après l'Hysterectomie Subtotale; Lyon Medical, vol. xcviii., p. 561 (April, 1902).

[28] A Case of Hysterectomy for Fibroid in the Fifth Month of Pregnancy, THE LANCET, March 2nd, 1901, p. 621.

[29] Ovarian Tumours and Ovariotomy during and after Pregnancy, THE LANCET, Feb. 8th, 1902, p. 356.

SOME THOUGHTS AND OBSERVATIONS REGARDING APPENDICITIS, ESPECIALLY WHEN APPEARING IN ITS ACUTEST FORMS.

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AGE—the process of growing old—has many notable disadvantages, but it has also its compensations, one of which is that in clinical work one can contrast a somewhat distant past with the vivid present and take note of any changes that may have occurred in the vital manifestations of disease. And that they do, and indeed must, arise, I have no manner of doubt, for as many diseases depend largely upon environment and social states for their development, and as permanency in these conditions is rare, so must changes arise in the maladies they promote.

[30] The complete essay, "Kystes Hydatiques pendant la Grossesse, l'Accouchement, et les Suites de Couches," is published in the Bohemian language (Prague, 1901) with a summary in French. The clinical reports were published in the Annales de Gynécologie et d'Obstétrique, March, 1902.

Appendicitis is no new disease, but that it is a disease largely on the increase, both as regards the number of its victims and its severity, is my conviction. And here are some of the reasons for this belief. 30 years ago and more, when I was a student in Edinburgh, one saw from time to time cases of typhlitis and perityphlitis, marked by the signs and symptoms of a localised peritonitis, and above all by the presence of a tender tumour in the right iliac fossa. Occasionally the tumour underwent the process of suppuration—the abscess was opened and as a general rule convalescence followed. None of these patients died and the very able physician whose clinical clerk I then was, the late Dr. Warburton Begbie, said of them, "They don't die." This early and happy experience was supplemented by nine years of arduous work in a manufacturing town, in which the population was largely composed of those whose age predisposed them to trouble in the appendix, and here, again, although the disease was ever and anon before me, recovery was the rule - I met with no fatality. Moreover, I did not meet with the cases of fatal so-called idiopathic peritonitis which are now believed by many to have hidden errors in diagnosis,[1] although one or two patients who died from intestinal obstruction very possibly, as I shall endeavour to show later, really perished through trouble in or around the appendix. It was not until 1887 that I met with lethal appendicitis, and then, strangely enough, within a very limited time I saw four cases, all of which were quickly fatal. Two of these patients I operated upon; in both foreign bodies were present, a gall-stone in one and an orange pip in the other, in both the appendix was perforated, and the cavity of the peritoneum contained much pus. This naturally drew my attention very forcibly to this morbid condition, and as the years have run this interest has not diminished, for I have seen a steadily increasing number of cases and also a very notable increase in their severity. And mine is no singular experience. Following the publication of the last Cavendish Lecture by Sir Frederick Treves in THE LANCET[2] there appeared in its columns some valuable correspondence bearing upon appendicitis and among other letters was one from Sir William T. Gairdner,[3] who is universally recognised as one of the ablest and most accurate of clinical physicians, both as regards his facts and his statement of them, and here is something of what he wrote: "The first point that appears to require notice in view of more recent researches is that the case in 1884 was absolutely the first case that I could find in my own records of a fatal result of perityphlitis during the 10 years in which the Western Infirmary had been open. A careful inspection of the records of the pathological department discovered two more such cases, as well as two others which had been sent in from without for examination. On the whole, and speaking with such diffidence as is necessary to allow for lapses of memory, I am inclined to think that this was the very first fatal case that had occurred to myself personally either in hospital or consulting practice." Five fatal cases occurred in a great institution in the course of 10 years, while during last year alone (as the medical superintendent, Dr. D. J. Mackintosh, M.V.O., courteously informs me) there occurred in the same institution 64 cases of appendicitis which demanded operation, and of these nine were fatal. Again, in the correspondence referred to is a communication from a well-known practitioner, Dr. W. J. Tyson[4] of Folkestone, in which he says: "I was at Guy's Hospital some 25 years ago and during my stay there of six years I never saw a case of appendicitis operated upon."[5] The experience of the students of Guy's Hospital must be very different to-day. My friend Dr. W. Jeffrey of Jedburgh, a very able and observant physician, writing to me on this very matter, says: "I know that in the old days, 35 to 40 years ago, when I sat at the feet of Warburton Begbie, whereas these cases of 'limited peritonitis' (as they were then called) gave one no anxiety—one looked forward to them one and all doing well—it is now very different. Every one of them makes me anxious and frequently, as the event proves, with all too great reason." These are, however, only individual experiences and we know how these may vary; but the same story is told and, as would be expected, even more emphatically, by the records of some great hospitals. Take, for instance, those of St. Bartholomew's Hospital, and in order to avoid a very large mass of statistics I have selected for comparison the three oldest hospital reports which to me are available and the three latest. How they work out is shown in the following paragraph.

In none of the surgical reports for 1882, 1883, and 1884 is there any reference to typhlitis or perityphlitis or to operations in connexion with either condition. It is true that under the heading of "Abdominal Section" in 1883 four operations were performed unsuccessfully in early life (in two of which cases the patients were under five years of age) and it is possible that harm in the appendix may have played a part in some of them, but there is no certain indication on this point. That under the title of "Abscess (Diseases of Connective Tissue)" a certain number of cases may be concealed is very probable, but here, again, there is no sure light. Turning to the medical reports the following is the result. During the three years under consideration there are recorded under the title of "Perityphlitis" 41 cases with two deaths and of "Acute Peritonitis" 38 cases with 21 deaths. The analysis of these deaths is interesting for in 1882 of the five patients who died only one was under the age of 30 years, and while this in no wise excludes the possibility of some of the others having suffered from trouble in the appendix, in the absence of all definite knowledge the fact is worthy of notice. In 1883, of the 13 cases of peritonitis which proved fatal only two were found to be due to appendicitis, while in 1884 of the three patients who died only one had assuredly this association. The gross results thus are 41 cases of perityphlitis with two deaths and 38 of acute peritonitis with 21 deaths, only two of which were certainly associated with lesion of the appendix, while it is possible that six others may have been. Add to these a fatal case occurring in 1884 under the title "Perforation," in which an opening in the appendix was found, and we have a mortality of 11 in a total of 79 cases.[6] The 15 years that elapse between 1884 and 1899 bring a new recognition of the importance and of the treatment of appendicitis. In this period it has become a malady with which the surgeon has more or less to deal. The term "typhlitis" disappears from the nomenclature and under the terms "appendicitis" and "perityphlitis" is the disease recognised. Its magnitude is further marked by divisions which increase in number as its various pathological and clinical manifestations are acknowledged. We find acute and chronic appendicitis without external suppuration, and this in surgical as in medical wards is a comparatively mild malady, but when the acute form is attended by suppuration, when it is in association with the occurrence of gangrene and with perforation of the organ, its gravity grows great. In 1899 there were in the medical and surgical wards 97 cases in all, with a gross mortality of 10, but 54 of these demanded operation. In 1900 there are tabulated in the medical and surgical departments 102 cases with 16 deaths, and in these 102 cases operation was necessary 80 times. In 1901 we find that there is the increasing number of 122 cases, that of these 12 patients died, and that it was necessary to operate on 83 patients.

In the first three years that have been considered there were 79 cases (typhlitis *and peritonitis*) with 41 deaths, a

[1] Regarding this point I have heard it frequently asserted that the term "peritonitis" not only covered in other years the fatality of appendicitis, but that it had its origin almost invariably in lesions of that organ. That this may be a very erroneous estimate of pathological possibilities such facts as the following will show. In 1882 there died in St. Bartholomew's Hospital 13 patients the subjects of peritonitis, and this is what necropsies in nine of the cases revealed: two were due to ulceration of the appendix, one to stricture of the colon, one to obturator hernia, one to bursting of a renal abscess, one to chronic dysenteric ulceration, one probably to pyæmia, one to carcinoma, and one to fibroma of the uterus; and, again, in a collection of 21 cases of perforative peritonitis collected by Jantz and quoted by Dr. W. Hale White, seven followed perforation of the appendix, five perforation of a gastric ulcer, three perforation of a typhoid ulcer, two hernia, one a rupture of the stomach, one a rupture of the intestine, one the rupture of a duodenal ulcer and one the rupture of a perimetric abscess.

[2] THE LANCET, June 28th, 1902, p. 1815.

[3] THE LANCET, July 12th, 1902, p. 108.

[4] THE LANCET, July 19th, 1902, p. 183.

[5] Of interest in connexion with this statement is the following by Dr. Hilton Fagge: "Even when typhlitis presents itself clinically under the guise of intestinal obstruction or of diffuse acute peritonitis I believe that it scarcely ever destroys life if judiciously treated. There may be cases in which a considerable part of the appendix sloughs away and in which death is inevitable. But I only know of one fatal case as having occurred within the last five years at Guy's Hospital if I may exclude cases in which death took place a few hours after admission and in which purgatives had been given freely." (Fagge's Principles and Practice of Medicine, 1886, vol. ii., p. 175.)

[6] As there is at this period in the reports not the same clear definition that is observable in the latest ones, I have classed together peritonitis and typhlitis and their issues, so as to avoid the chance of unwittingly diminishing either the number of cases of appendicitis or their fatality.

considerable number of which may, however, have been unconnected with the appendix, while in the later years there were 321 cases (perityphlitis and appendicitis) with 38 deaths. The thought, however, arises that in the increased number of the sick attending the hospital may be found the explanation of this apparent increase, but that this is not so is indicated by the fact that while in 1882 there were 4249 patients and only 16 cases of perityphlitis and 20 of peritonitis, in 1901 with 6331 patients there occurred 122 cases of perityphlitis alone.

Two other points in relation to increase in frequency and in severity seem worthy of note. The first is the greatly increased frequency of relapse. I can recall a good many cases seen early in my professional life which have since then escaped all similar trouble, but it has not been so with those met with in later years—relapse, if not the rule, has at least become far from exceptional, and it is this tendency and the surgical interference that it demands that make the number of operations on the appendix so much more numerous. The second is the notable way in which in certain families the malady is found. As I write this, and without any great effort of memory, I can remember several family groups which illustrate this. In one both the father and the mother suffered from the disease, two daughters out of four also suffered and so severely that in one case suppuration occurred and in the other gangrene; in another group the mother was the first attacked, and out of a family of three—two sons and a daughter—two have been its subjects, the son requiring operation. Again, two brothers in a family of five were attacked, one of whom died rapidly in his second attack; two sisters in a family of four sisters were attacked, one requiring operation and the other remaining now under watchful observation; and in one family of two, a sister and a brother, the sister had one mild attack, the primary one in the case of the brother demanding operation. All these having come under my own observation within the last few years can hardly be regarded as fortuitous, and the interest attaching to them is the greater because inquiry affords no evidence of a tendency to gastro-intestinal ailments, or any mortality from such in the immediately preceding generation. Even in the sufferers themselves with the exception of one or two of the girls who had been subject to constipation, there was no story of those nervous symptoms, of those circulatory disturbances, or of that vicious metabolism to which some writers attach importance as hereditary exciting causes of this disease.

With these recorded facts, which I incline to regard as proofs that the disease is an increasing one and that its severity is apt to be greater than it was in other years, my attitude, like that of many others well known to me, has undergone considerable change as regards the larger necessity for operation in cases of appendicitis, but I am still absolutely averse to the assertion that the diagnosis of the malady carries with it inevitable surgical interference. In the very large majority of cases, the prognosis, when the case is under careful medical supervision, is a favourable one, but there are certain exceptional examples in which the possible recovery of the patient rests largely with the surgeon. To the observant practitioner who has had a fairly large experience of appendicitis, such cases are not difficult to recognise—the stamp they bear is a very clearly cut one—but to the man of average experience, who has seen many cases get well and who only knows through the teaching of others how tragically some can die, there are few more difficult or anxious considerations than the decision as to their management. It is with the endeavour of rendering this difficulty, which was at one time a very personal one and which, I know, is still a puzzle to others, somewhat easier that I venture to record some of the lessons that have come to me on this point, and as our power of recognising the gravity of a disease when some of its most notable features are absent depends largely upon our acquaintance with it in its truest developments, I detail two concrete characteristic examples of ultra acute appendicitis

CASE 1.—A patient of Dr. J. W Campbell of Mentone, a man in early middle life, had, some six months before the illness in which I saw him and while resident in London, a sudden severe attack of abdominal pain He was seen by one of the best known of English physicians and by an able surgeon, their joint diagnosis being one of gall-stone colic. Early in the morning of a certain Saturday, while in bed, he was again attacked by the old pain, the character and the situation of which he quickly recognised, and he was seen in the course of a few hours by Dr. Campbell. The patient was then suffering severely and a dose of morphia was given him, which brought so much relief that for many hours he was comparatively easy. On the Sunday morning the pain returned with increased violence; he vomited, became cold and depressed, and was obviously very ill. Dr. S. M. Rendall, who then saw him with Dr. Campbell, agreed with the latter that he had an acute appendicitis and that surgical interference was necessary. The same evening at his bedside I met these gentlemen, when his condition was typical of what had befallen him. He had an anxious, drawn, pained look, and complained much of abdominal suffering; he had rather quick costal breathing, a slow and very small pulse of 84, a subnormal temperature of 97° F., and a flat, board-like, non-tender abdomen, but one which did not permit of a deep inspiration being taken, and the nervous, anxious attitude of a man who felt himself to be gravely ill. On opening the abdomen a quantity of milky-looking pus made its escape, and when the cæcum was drawn up it was evident that the cavity of the pelvis was full of the same fluid. The appendix, enlarged, inflamed, and thickened, presented a large perforation on the inner aspect of its lower third and its mucous membrane was extensively ulcerated. Sponges with a strong solution of biniodide of mercury (1 in 2000) were used to cleanse the parts, and a large drainage-tube was placed in the recto vesical pouch. Although it was some days before the tube could with safety be removed he made a good recovery.

CASE 2.—The patient, a girl, aged 16 years, had in the month of June what was recognised as a threatening of inflammation of the appendix which was alone marked by a single act of vomiting and some tenderness on pressure in the right iliac region, for she had no fever and made no complaint of pain until examination of the abdomen revealed the tender area. For this she was most carefully treated by absolute rest and careful dieting and in the course of a week or two she seemed quite well. Examined three months later there was not a shadow of evidence of her former slight illness to be detected. In the early hours of a morning at the end of September she awoke with abdominal pain, not very acute in its character for it was much relieved by a hot application, but she shivered, became hot, and felt very ill. Seen by a medical man in the morning she was found to have a temperature of 102° F., a quick, peculiarly small pulse, a flushed face, a flat abdomen, with rigidity and dulness over the cæcal region, but with no tenderness and no muscular rigidity beyond this area. As there was a history of some constipation her medical attendant regarded the case as a typhlitis due to a packed cæcum, the apparent dulness supporting this opinion An enema was ordered which acted freely and well, but so comparatively mild was the pain in the abdomen that opium was not thought necessary. In the evening the general condition was not improved for the temperature was higher (104°) and the pulse quicker (130), but the patient expressed herself as feeling easier. A small dose of opium was given at bedtime and a fairly good night followed. On the succeeding morning the temperature had risen to 105°, the pulse to 150, the previously dull right iliac region had become clear and the muscular wall soft, while there was increase in the area of abdominal tenderness In the late afternoon I saw the patient. She was bright and happy-looking, even cheerful when roused, but she was somewhat somnolent—somnolent from that state of euthanasia which happily marks some acute septic processes. Her pulse was fully 150, her temperature was 105° (it had been higher earlier in the afternoon), and the abdomen, not full and not markedly tender, was still moving easily with respiration—indeed, she could take, when asked to do so, a nearly full inspiration. She made little complaint of suffering, had never vomited, and the most careful examination failed to give any evidence of intra-abdominal effusion. Despite the absence of many indications which in the presence of an acute peritonitis are sure guides, there could be no doubt as to the diagnosis here and the abdomen was opened. Red, distended, lymph-coated intestine and a much infiltrated omental edge at once showed themselves, and when the appendix was exposed its colour told the story of its condition. The mesenteriolum cut under the ligature as cheese would cut and the surfaces left were as dry, for every vessel in the mesentery was plugged. The appendix when drawn upon separated at its insertion into the cæcum—for it was a gangrenous mass—and left a considerable aperture in the wall of the bowel. This was closed by a double row of Lembert's stitches, the parts were

carefully cleansed with swabs, and two drainage-tubes passing into the floor of the pouch of Douglas were so arranged with reference to the aperture in the cæcum that they would command any leakage from the viscus. Within 36 hours of the operation her temperature was normal; the drainage-tubes, allowed to remain for ten days, were expelled by the process of granulation, and her recovery was uninterrupted.

But one cannot always expect to have the picture so unmistakeably drawn as it was in these two cases; at times it is by fewer and less notable indications that we must be guided and, as these vary in intensity but never in importance, let us regard them somewhat in detail.

It may be accepted as a fairly safe rule that the acuter the initial symptoms the greater is the gravity of the case, and this will be emphasised—so far as experience carries me—if a rigor occurs accompanying or *immediately* preceding the acute abdominal pain. Each time I have met with its occurrence it has been associated with the gangrenous form of the disease, and I therefore regard it as of great prognostic and, indeed, diagnostic, value. The pain which attends the ultra-acute form of appendicitis is, as a rule, of great severity, but it may begin remote from the region in which it has its origin and in this way may lead to error. I have known it, from its early situation in the sacral region, mistaken for dysmenorrhœa, and its appearance in the left iliac region as due to a perimetritis. After a time, however, it is generally referred to the right iliac region, where, as a rule, it is attended by muscular rigidity which may be persistent or it may somewhat quickly pass away. The pronounced character of this local muscular rigidity and the dulness on percussion which it is capable of giving rise to lead at times to the belief that the case is one of stercoral typhlitis, and the treatment may be disastrous. As a result of the morbid process within the abdominal walls they become more or less quickly involved in the rigidity and we find developed the hard, flat, board-like abdomen—an indication of such grave significance. But this valuable sign is not always present. There may be a perforated appendix or cæcum, or it may be an acutely gangrenous process at work, and the abdominal walls may be soft and yielding to the touch—unmarked by much tenderness and playing their part more or less freely in the act of respiration. To watch them regarding this last point is of importance, for from time to time it will be noted that a soft and slightly tender abdominal wall does not move in respiration, and that if a full inspiration be attempted it will be cut short ere it reaches its height. After a time abdominal fulness characterises most cases and measurements taken above and below the umbilicus are better guides to its increase or its diminution than mere visual recollection, but for its proper estimation two matters require consideration—the giving or the not giving of opium and the open or locked state of the bowels. As the opium tends to produce distension the occurrence of a stool may lessen the girth by a couple of inches and this in the presence of severe peritonitis. With the value of the pulse as a guide all are familiar, and if its features were constant they would be of higher value, but they vary, and they must be read in close connexion with all the others, especially the temperature. A quick *small* pulse—for its character is of greater value than its rapidity—with a high, or, worse still, with a low, temperature should attract immediate attention, and in closely watching its behaviour—its tendency to quicken or to become slower, to become feebler or to gain in force—we find the surest of helps, but it must be borne in mind that a suppurative peritonitis may be in progress with a fairly good pulse and a normal temperature. Very high temperature in the beginning with a rapid small pulse and notable although it may be not very acute *local* conditions, portend a state demanding quick interference, and although in many such cases this may count for little as regards the result, still such sufferers may, and do, recover, and their one chance lies in an early laparotomy. To watch and to record every few hours the pulse and temperature ratio is a *sine quâ non* in all cases of appendicitis, for in some with a normal temperature a quickening pulse may tell the true story and a pulse of 120 should, as a rule, be regarded as a very ominous sign. I recall one case in which an hour after the perforation of the appendix had occurred the pulse and temperature were normal, at the end of 12 hours the one was more than 130 and the other was 102° F., and laparotomy saved the patient's life, while in another of gastric ulcer the pulse when the case was first seen was under 90, in a short time was nearly 120, and here again prompt interference carried with it success.[7]

Vomiting, common in many acute cases, is not always present in the ultra-acute, but when it exists, when it is severe and continuous, or when having appeared early it disappears for a time and then returns and if the vomited matter be porraceous, spinach-like, in character its prognostic value must not be overlooked.

In thus dealing with leading indications we may have begun in a wrong way, for after all ere we hear the patient's story, ere we feel his pulse or enter upon the consideration of his general state, we have seen his face and his attitude, and we have learnt much. The face "*grippé*"—the face pourtrayed by Laennec—with the furrowed forehead and the drawing upwards of the features at once strikes us, and in some cases with due consideration given to all else may really determine for operative interference. It is most marked in perforation cases where suffering is severe, but it is present in many septic states where pain is not so prominent a feature. A facial aspect such as that referred to, with restlessness and marked vital prostration may indicate in the malady we are contemplating, as it may in other states, a gravity unnoted in any other way. Diarrhœa, infrequent in acute cases, may be present in the very severe ones, having its probable origin in some infective condition of the intestinal mucous membrane and pointing to the existence of a toxæmia. In the proper examination of such sufferers respiratory action will not escape observation, and decided costal respiration, especially in the case of male subjects, is an indication of much prognostic value.

To some it may seem odd that no mention is made of the presence of the tumour in the right iliac fossa which is as characteristic of the majority of cases of acute appendicitis as is the sausage-shaped lump in intussusception, but in the form of the disease with which we are more particularly concerned it is not present because it either has not had time to form or more probably, owing to the existing vital condition, would never form at all. To me—and in this attitude I differ with deference from the opinion of many others—its presence would not of necessity indicate interference, for I cannot accept the dictum that it is always significant of the presence of suppuration. Many such lumps have I seen disappear, as a perimetric mass disappears, and this so completely that an operation being performed in the quiescent condition small trace of their previous existence was discovered, certainly there was no pus. Given, then, in an acute case a combination of the conditions we have considered—or it may be a notable development of two or three of them—rigor, intensely severe abdominal pain, vomiting, a quick small pulse—or a slow feeble one—a temperature very much raised or very much depressed, a hard, contracted, tender abdomen with its point of maximum tenderness within the right iliac sphere or one marked by the same local conditions with spreading tenderness getting quickly full, short costal respiration, and a drawn face, then will safety surely lie in immediate operation. And with such conditions in the young or in the old the greater is the urgency as it is also in the case of a pregnant woman.

Before finishing the consideration of diagnosis and its bearing upon operative interference it behoves that something be said regarding that "period of repose" which may occur in the manifestation of acute appendicitis and which, if unregarded, may lead to serious error. I take it that this is not confined to cases of severe appendicitis, for it is common to all perforative lesions of the abdominal viscera and its *raison d'être* is difficult of explanation. Gangrene of the appendix with destruction of its nerves will not always explain it, for I have known it appear after a rupture of the intestine and in the case of a burst bladder, and it is more probably due to some toxic or paralysing influence exerted on the nervous apparatus of the peritoneum itself; at all events, we recognise it in the cessation for a time of the most marked and disquieting phenomena in a grave case and the medical man and patient may alike be deceived by it. And yet, so far as my own experience carries me, there has generally been found in *local* conditions that which was sufficient to guide one aright. Pain, vomiting, rapidity of pulse (this least of all), rise in temperature, and the general

[7] A case in which with high temperature there is a slow pulse is by some held as little likely to demand the help of the surgeon, but this is not always so, for a year or two ago I had under my care a female patient whose pulse never rose much over 80 with a temperature of 102° to 104° F., and in whom pus was evacuated with success on the fourth day of her illness.

feeling of distress may everyone of them be subsiding, but the local presence of tenderness, of abdominal retraction, of rigidity, or of fulness (and any of these may be slight)—will keep awake the sense of anxiety and lead to safe action.[8] The absence of peristalsis as ascertained by the use of the stethoscope may prove of high value, and the estimation by a frequent blood count of increase in leucocytosis, especially as regards the polymorphonuclear cells, may be of great assistance. Unhappily in the case of fulminating appendicitis when a sufferer is too feeble to react to the toxæmia this last test may fail us, but in these cases we are not so much dependent upon it as in certain others where the question of suppuration becomes pre-eminent.

Mr. W. H. Battle has in a valuable paper in THE LANCET[9] drawn attention to the great value attaching to the presence of effusion in the peritoneum as significant of early peritonitis, and where by percussion—or better, by flicking with the finger in the region of the flanks—dulness or thrill can be elicited, operation should be once performed. Unfortunately, in a very considerable proportion of the most acute cases it is impossible to demonstrate the presence of any effusion and when the peritoneum is opened the state of dryness of the field of operation is very notable.

Rectal touch is of the highest value in the examination of cases of peritoneal inflammation and in appendicitis it should never be neglected. It may confirm the diagnosis where the inflamed organ lies in the pelvis, it may demonstrate an acutely tender mass high up in the iliac fossa, it will certainly show an inflamed peritoneum when external abdominal tenderness may be slightly marked, and it may lead to the recognition of certain conditions that will alter entirely our original belief regarding the case.

Striking as are the phenomena that indicate a lethal appendicitis, it is still possible to misread them, and as the best way to avoid mistakes is to be aware of the possibilities of the errors we are likely to make, here are some that are feasible.

Colic of the appendix—a condition the existence of which is denied by one of our best and ablest authorities—may, when severe, prevent the signs that usually attend a perforation or a rapidly destructive lesion, as witness the following story. A Frenchman, aged 30 years, who never previously had had any abdominal trouble, was while dressing in the morning conscious of some uneasiness in the lower abdomen on the right side. Jokingly he told his wife that he had an "*appendicite*," but as the crampy feeling quickly passed away so did his thought concerning it. An hour after his midday meal, while walking in the street, he was seized with such intense abdominal pain that he became rapidly collapsed. Seen by his French physician, the gravity of his case and its probable cause were at once recognised and in the afternoon, three or four hours after his seizure, I had the opportunity of examining him. He was suffering greatly, as evidenced by his complaints, by the pale, clammy state of his skin, by his anxious, drawn face, by his quick, feeble pulse, and by the intense rigidity of the muscles over the right iliac fossa. The diagnosis of a ruptured appendix seemed fairly clear, but as it was possible that a severe intestinal colic might explain his condition a full dose of morphia was given him. Means were taken to rally him from his state of shock and it was arranged that I should see him a few hours later. On an evening visit—six hours from the time of his primary attack—he was found still collapsed, but his medical attendant, who had remained with him, stated that the morphia quieted him, that he had comparative ease, and that his general state had correspondingly improved. A short time before my arrival the intense pain had returned, to be quickly succeeded by great vital depression. So notable was this and so enduring that one of the two other physicians summoned by the family was opposed to operation, not because he did not think it necessary but because he believed that the patient could not survive it. When the abdomen was opened and the appendix was found this was quite normal in appearance, as were the parts in its neighbourhood. Its proximal third was, however, harder, thicker, and firmer than the rest of the organ, but it bore on its surface no evidence of any notable lesion. Search was then made for harm elsewhere, but as nothing was found to upset the diagnosis the appendix was removed. On further examination when the hardness and tenseness were much less evident it was discovered that a grain of barley still incased in its hard outer husk was lying transversely to the axis of the appendix with its sharp and pointed extremity buried in the submucous and muscular tissue and stretching—without perforation—the peritoneal covering of the organ.

In the absence of all naked-eye evidence of inflammation or ulceration externally or internally and in the passing state of rigidity in the area of the appendix corresponding to the position of the foreign body, I regard this as a true case of appendicular colic and although the pointed character of the barleycorn may have been able to inflict more irritation than a pointless body would, it is difficult to believe that by its presence any foreign body might not give rise to corresponding although less pronounced phenomena.[10]

Renal and hepatic colic have proved sources of error in the recognition of acute appendicitis and I remember one case in which the mass formed round an inflamed appendix was in such close relationship with the liver that it was no matter for surprise that in the opening days of the illness the patient's sufferings were thought to be due to the passage of a gall-stone.

Under the conditions which mark some intestinal obstructions may be hidden the morbid changes associated with an ultra-acute appendicitis, for the peritonitis thus provoked may, by its effects upon the neighbouring coils of intestine, give rise to such clinical phenomena as are inseparable from those of mechanical obstruction and yet with care it is possible to differentiate between them. Here is an instance in point. A young German woman in the best of health, who had suffered no abdominal symptoms of any kind, was in the early hours one morning seized with a severe pain in the abdomen, accompanied by vomiting. The French physician under whose care she was asked me to see her with him in the forenoon of the second day of her illness, when her state was as follows. She had a temperature of 101° F., a fairly good pulse of 90, a flushed face, a rather full but in no wise tender abdomen unmarked by muscular rigidity but in which one observer thought coiling was visible, and constant, forcible vomiting. She was constipated and there was little passage of flatus. It appeared to me that such complaint of pain as could be elicited by examination was greatest in the right iliac region, but to abdominal pressure she was strangely tolerant. On the evening of the same day she was admitted to the British Hospital under my care, when it was found that her condition was worse, for her abdomen was fuller and the vomiting was quite stercoraceous in character, but she still had a raised temperature of 102° and the impression remained with me, largely on that account, that the obstruction was inflammatory—probably perityphlitic—and not mechanical in its nature. In deference to the strongly expressed opinion of her own capable medical attendant, with whom the diagnosis of intestinal strangulation abode, a median section was performed and the intestine in the right iliac fossa was found to be much distended with its walls highly injected and as one neared the cæcum spots of lymph became visible upon its surface. Then there appeared what at first sight was taken for a loop of intestine—for it was nearly as large—a hugely dilated and distended appendix with plum-coloured walls upon which at several points gangrenous areas were present. When this was removed—and at its proximal end the dilatation was much less—it was found to contain three stercoliths, each of the size of a large olive, and so resembling those berries in colour and form as to be easily mistaken for that fruit. The congested intestinal surfaces and the area in which the appendix lay were mopped with a strong mercurial solution, a large drain was placed in the pouch of Douglas, and the wound was closed. Despite the occurrence of a stitch abscess and the necessity for breaking up more or less the abdominal wound, the patient made a good recovery, for all the indications of obstruction disappeared with the operation and she quickly regained her health.

Among the many cases of severe appendicitis I have met

[8] For clear, full, and valuable teaching on this point see a lecture by Mr. Charters J. Symonds delivered before the Hunterian Society in 1899; and a paper in THE LANCET of May 10th, 1902, p. 1305, by Mr. A. H. Tubby on the Quiescent or Latent Period in the Course of Grave Abdominal Inflammations.

[9] THE LANCET, June 16th, 1902, p. 1679.

[10] That the personal element in this case had much to do with its apparent gravity was, after the operation suspected, and since then the medical attendant of the patient has told me that while he was suffering from a nephritic colic his condition was very similar to, but much less acute than, that which led to the removal of his appendix.

with this is the only one in which the symptoms of intestinal obstruction were an early marked feature, and its story makes me question whether some of the fatal cases of obstruction which one encountered in earlier years were not due to a peritonitis of appendicular origin and the true cause of the fatality passed unrecognised.[11] In the absence of rise of temperature or other indication of inflammatory ill an error such as this is easily committed.

The close anatomical relationship of the appendix with the right adnexa of the uterus leads occasionally to errors in diagnosis, for an acute inflammatory lesion starting in the area of the right iliac fossa may possibly owe its origin to a suppurating tube and not to an appendicitis. As a rule, however, the onset in the former is not so severe (the pain may be most acute in the *left* side) and examination by the rectum or vagina will in a very large majority of cases lead to a recognition of the true state of affairs. But simulation may arise in another way, as witness the following case. A young English woman, aged 20 years, was admitted into the British Hospital with a diagnosis of acute appendicitis. The story of her medical attendant was that he had seen her on the previous evening, when he had found her with a history of sudden and severe abdominal pain having its origin in the right iliac fossa, with a tender and rigid lower abdomen, with a quick pulse, and with a temperature of 102° F. On the following morning this condition had not much changed; she had passed a restless night. She still complained of much abdominal suffering and was still feverish, the temperature being 101° and the pulse 110. The abdomen was full, its muscular walls were rigid, it was tender over the whole of the lower third, but especially tender on the right side and in the middle line. Rectal examination revealed the pouch of Douglas distended and boggy, evidently with effused blood. Inquiry then elicited the fact that having barely ceased menstruating she had taken a cold bath, immediately subsequently to which the acute pain made its appearance. As she was a virgin and there was nothing in her case to suggest the possible existence of an ectopic gestation it was believed that some distended ovarian or Fallopian vein had given way under the vascular strain produced by the cold bath, and that her symptoms of peritonism owed their origin to the intra-peritoneal hæmorrhage. She was treated accordingly and with steady diminution in the effusion she was quickly restored to well-being.

Pelvic peritonitis associated with gonorrhœa in the female I have seen simulate very closely appendicular inflammation, for it had its most acute manifestation on the right side, but here again rectal, followed by vaginal, examination and the recognition of the state of the right fornix made the case clear. And in young men a peritonitis of similar origin should not be forgotten, for although it is rare to find it unassociated with an epididymitis or the presence of a gonorrhœal discharge, it may occur independently of them and by the condition of the vesiculæ seminales as ascertained by rectal examination will the diagnosis be made sure. The intense pain in the inguino-scrotal and iliac region, the severe and repeated vomiting, the high fever, the rigid lower abdomen, the facies, and the general condition fill in the picture of appendicitis.

With our attention so strongly directed to the appendix as the probable source of all evil in the region of the abdomen in which it is situated we are apt to forget that in the cæcum itself there may arise pathological conditions the acute vital manifestations of which may be indistinguishable from those arising within or around its attached neighbour. Here is a case in point. A woman in middle life, with a strongly marked history of gout, consulted me regarding some abdominal pain from which she had suffered for a good many months. It was spasmodic in character, sometimes occurred at night, did not return very often, and was closely associated, in her thinking, with the taking of animal food. She suffered much from constipation but there had been no vomiting. On examining her there was nothing in the abdomen to attract especial attention except that in the region of the cæcum the percussion note seemed to be duller than usual, and when firm pressure was made here and slight tenderness elicited there rose under the hand a soft cylindrical mass which quickly disappeared. While this was tangible she was conscious of the presence of the pain which formed her great complaint. That this was a thickened cæcum thrown into contraction by pressure on its surface was evident and I made very careful search for any evidence of growth or obstruction in the colon but with a negative result. When obtained her motions were natural; she had never passed blood or mucus at stool and was not subject to diarrhœa. A few days afterwards I was hurriedly sent for as she had been seized with sudden severe pain in the right iliac fossa and she then presented the conditions which usually characterise an acute perityphlitis. She had, however, a good and not too rapid pulse and her temperature was 101° F. There had been no vomiting; there was no marked fulness of the abdomen, but it was tender over the right lower area, and there was in that situation notable muscular rigidity. With my previous knowledge of her I believed that some ulcerative process connected with the diseased cæcum was the most likely cause of her acute suffering. In the evening she was easier; the pain and the local evidences of it were less marked; the pulse, a little over 100, was of good force; the temperature was 102°; and the abdomen, albeit fuller by one inch and with marked rigidity in the cæcal region, was absolutely soft elsewhere and rose easily and freely on deep inspiration. The succeeding night was a restless one and in the morning the general condition evidenced no improvement, for the pulse was still over 100 and of diminished strength. The temperature was 103°, the face was drawn and anxious, and although the abdominal measurement showed a diminution of a full inch and its walls were still pliant there was increase in tenderness both as regards its area and its intensity. The bowels had moved freely and spontaneously and the motion was in all respects a characteristically healthy one. Believing that a peritonitis was in progress—a diagnosis in which Sir Henry Blanc, who saw the case with me, agreed—I, with his able assistance, opened the abdomen. The escape of a considerable quantity of intensely bloody serum and the appearance of congested intestine confirmed our belief, and in drawing up the cæcum, the walls of which were greatly thickened, two gangrenous patches were visible on its surface. One, of the diameter of a shilling, was situated on its inner and lateral aspect, and the other, measuring at least five times the size of the other, presented on its anterior surface. The smaller one was treated by invagination and the other by a free opening and the insertion of a Paul's tube. The dilated cavity of the cæcum was quite empty and its mucous lining generally seemed to be healthy. The ascending and transverse colon was carefully examined, but there was no change to be detected in it either as regards its dimensions or the thickness of its walls. By interrupted sutures the cæcum was attached to the peritoneum and the wound was closed. The patient made an excellent recovery and her after-history was of interest, for she developed within a few months of the operation a malignant stricture of the splenic flexure of the colon, which has since been removed with success. That this occurred apart from the morbid state of the cæcum I feel well assured, for what the first operation revealed was a true cæcitis or typhlitis in which similar pathological changes occurred to those which we meet with in a chronic appendicitis. Its chief interest to me lies in the fact that had I not seen the patient upon a previous occasion and formed some idea of the existing conditions there was nothing in the picture of her grave illness to distinguish it from that of an ultra-acute appendicitis.

Of the close simulation of lethal appendicitis by perforated gastric or duodenal ulcer, especially the latter, and by the twisting of the pedicle of an ovarian cyst, I have no personal experience, but I know from the records of others how strong the counterfeit may be, and it is always well to remember the fact when preparing to operate upon a seemingly severe case of appendicitis. Little reference is made in text-books to the fact that it is at times difficult to differentiate between appendicitis and typhoid fever, and yet the problem is a notable one. If operation always and of necessity followed the diagnosis of appendicitis I am sure that certain cases of enteric fever would be submitted to unnecessary and dangerous interference, for I have seen the zymotic disease ushered in with very acute perityphlitic symptoms, with severe pain, with abdominal tenderness and right-sided

[11] This reflection is strengthened when one calls to mind—as most operating surgeons can call to mind—cases in which in desperate conditions of obstruction all that could be done was an enterectomy, and this with the happiest results. It is true that the relief of intestinal distension and pressure may at times serve to release a strangulation or permit the withdrawal of an intussusception, but it is quite as likely that at others the immediate good which opening the intestine produces represents the removal of the urgent obstructive symptoms that inflammation in the appendix may and can produce.

muscular rigidity, with indeed all the phenomena, except the tumour formation, that mark appendicular inflammation, and within a week the appearance of typhoid spots reveals the true nature of the malady. In such cases our sheet anchor in diagnosis will rest with the increase or the diminution of the leucocytes, for in the case of the fever they will diminish, while in the other, especially if pus-formation occur, they will enormously increase.

A condition difficult of explanation yet not of recognition, and apt to occur in connexion with many abdominal troubles, may, when appearing with the appendix as its exciting cause, lead us astray in regard to prognosis and to treatment. I refer to peritonism. We all know it, but I am sure we do not all know—too often cannot know—how to estimate it aright. It is so extraordinarily like peritonitis that it is hard, sometimes impossible, to distinguish between them, and yet the importance and the gravity of the one are occasionally only mimicked by the other. Its bearing upon the matter under consideration is, however, important. Sir Frederick Treves has drawn attention to the fact that many cases of appendicitis occurring in women begin during the course of menstruation and "that this is explained by the circumstance that the two organs concerned are closely allied and that they certainly can mutually disturb one another." With this important observation it is well to bear in mind this other—one more or less familiar to many practitioners and to which Dr. S. J. Gee has particularly drawn attention—that at times in women a day or two preceding the flow they have abdominal pain, they shiver, they vomit, and they get a full—at times a very tender—abdomen; they have a quick pulse and a rise in temperature; they lie in bed with their limbs drawn up and they present a typical picture of peritonitis. Yet when the discharge appears the whole picture is changed, every grave sign and symptom disappear, and the woman is well. She has had an attack of peritonism, and if this were mi-read and on exploration of the pelvis there was found no evidence of harm there, an unnecessary laparotomy might be performed in the search of a ruptured appendix. Even when the appendix is the cause of a peritonism it may be difficult to recognise the offender, for through the abdominal distension which is one of the most notable features of the latter condition, by the gastric intolerance and the constipation attendant upon it which also mark its presence we are met with the phenomena of a pseudo-occlusion. The swollen abdomen lacks, however, the tenderness of the truly inflamed one, and even when there are a certain quickness of pulse and a certain rise in temperature the freedom with which the patient moves and breathes and the expression of the face suggest the presence of a deception. I have a note of a case in which, in the third attack of a recurrent appendicitis, the abdomen was so distended and the vomiting so persistent that immediate operation was contemplated, but close and constant observation demonstrated the facts that the temperature never rose over 99·4° F. and that the pulse, excellent in quality, never much exceeded 100. The expression, too, was in no wise drawn, and such abdominal tenderness as existed was only discovered in the right iliac fossa. The condition of absolute constipation was pronounced, but copious and repeated enemata brought down gas mixed with a small quantity of fæcal matter and this gradually augmented, so that by the end of the second day a satisfactory movement was obtained. The meteorism gradually subsided and there could be felt in the region of the appendix a thick, rather tender, cord. On the removal of this—for it was an enlarged appendix—a few weeks later there was in its neighbourhood no evidence of any recent peritonitis.[12]

Important as the condition of peritonism always is, and at times most grave in its import, it is difficult to accept unreservedly the dictum of some that by its very presence it calls for immediate operation, for, as we have seen, it does not always mean great things, and it may pass away leaving no gross evidence in its train. But it is not within the peritoneal cavity alone that conditions may arise which render the recognition of a perityphlitis a difficulty. A commencing basal pleurisy or pneumonia, involving as they are apt to do the pleural surface of the diaphragm, may tend to a train of symptoms that, without sufficient care in their investigation, may easily be mistaken for those arising from an acute peritoneal inflammation. This fact has been long the common knowledge of most practitioners and it has led many to investigate as a matter of routine the pulmonary conditions in all acute disease. By following this rule the error is not likely to be made, for the auscultatory sounds associated with a pleural lesion are as a rule very widely different from those one finds in association with an inflamed peritoneum, but as Mr. H. L. Barnard[13] has lately pointed out in a most interesting paper there are certain conditions which may tend to mislead and have, indeed, misled some excellent and careful surgeons. Apart from the help visual examination of the chest and the use of the stethoscope will surely bring, the consideration of the temperature—especially at the beginning of the illness—of the pulse and respiration rate, of the catching character of the latter, of the fact that however hard and rigid the abdomen may feel it will momentarily relax in the act of inspiration, and that its tenderness is chiefly "superficial and firm deep pressure with the hand may be permitted," will direct us aright and turn the thoughts to the true direction in which the patient is suffering.

With reference to treatment I have not much to add. I hold with many that the giving of opium is apt to mask guiding symptoms and that it is best if possible to avoid it. But if it must be given—and at times acute suffering imperatively demands it—opium by suppository, or laudanum given as an injection, is better than morphia subcutaneously. If movement of the bowels be called for—and it very often is—then we must depend upon the stimulating action of an enema; aperients given by the mouth are fraught with danger. The method of operation in those cases done early—that is, within the first 48 hours—is, as a rule, straightforward and simple, and I would only add that I have found its simplicity, and I believe its safety, increased by the incision being made closer to the anterior superior spine of the ilium than is usually advised. It is quite possible to display and to remove the appendix without any protrusion of the small intestine. What this may mean to a somewhat inexperienced operator a recollection of the past with many of us will best explain, and inasmuch as these operations fall under the category of emergencies and must, if they are to be of any service, often be undertaken by the practitioner in attendance upon the case, the easier the task is for him the better will it be for his patient. In the cleaning and drainage of the inflammatory area and its surroundings I have, as a rule, a greater belief in the use of marine sponges and "swabs" than in irrigation, and in large-sized drainage-tubes with gauze wicks than in gauze packing. The removal of the gauze is often a very painful process for the sufferer and it is not always so efficient as we may believe it to be, for every now and then a wound thus treated will look well on its surface, while in its depths there is confined an exudation which should have been drained away. And in certain circumstances, in a somewhat prolonged retention of the drainage-tubes, I have found only good—the process of granulation has expelled them and the tracks through which they passed have quickly closed and have shown no tendency to yielding in after-days. In the after-management of bad cases—cases in which, despite early operation and all therein involved, the septic process is not checked and the evidences of peritoneal infection do not subside—I would bear testimony to the extreme value of normal saline solution used subcutaneously. I am not likely to forget one case under the care of Dr. Lalou and myself in the Asile Evangélique of Cannes, the happy management of which rested almost entirely in his hands. It was that of a young woman upon whom I operated within 24 hours of her seizure, in the presence of a well-established dry peritonitis having its origin in a gangrenous appendix. In this patient, although improvement followed for a time, yet, despite free drainage and the means that best meet such conditions, on the fifth day of her illness her state seemed desperate. Her aspect was that of a dying woman; her abdomen, drum-like in form, was intensely tender over all its surface; her temperature was high (103° F.), and her pulse was quick-running—well-nigh uncountable; and she had that incessant gulping vomiting of dark matter so characteristic in the closing scenes of a septic peritonitis. Yet she lives, for so soon as her bowels moved and a free diuresis was established—and for this the saline infusion was responsible—

[12] Lejars: Chirurgie d'Urgence, p. 415.

[13] THE LANCET, August 2nd 1902, p. 280.

she began to amend, and ultimately recovered from such a condition as one had learned by sad experience to regard as quite a hopeless one. Several times in 24 hours she received a subcutaneous injection of some ounces of normal saline fluid to which were added small doses of strychnine—for her heart's action was of the feeblest—and in and through these means she exists to-day.

Here, then, may end my quest. Early operation in appendicitis (that is, within the first 48 hours) I practise only in the grave cases and I am happily able to bear strong testimony to its value and its success, for I have never found it increase a peritonitis already in existence—indeed, it has cured it. The difficulty has often been the prompt recognition of those conditions in which delay too often spells deaths, and my endeavour has been to render, if possible, their recognition more facile and less hesitating.

Cannes, France.

THE HISTORY OF THE DISCOVERY OF TRYPANOSOMES IN MAN.

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MISTAKES as to priority in scientific discoveries are so frequently made, are so easily perpetuated, and are so discouraging to workers that we shall present no apology for attempting a critical history of the discovery of trypanosomes as parasites in man. There is the more call for someone to undertake this task because the discovery promises to be an important one and because some fragmentary discussion regarding it has already taken place. So far as we know at present there are five possible claimants in the field—namely, Hehir, Barron, Nepveu, Forde, and Dutton. We propose to examine their respective claims as thoroughly as possible, but must premise that we can judge of these claims only by means of the published documents which are now before us and which we mention specifically in the footnote references.

Major Patrick Hehir, I.M.S. (1891, 1892).—So far as we know no claim has yet been advanced in favour of this observer being the discoverer of the human trypanosome, but as this claim may be made in the future and as his case appears to be as good as those of the two following observers, we may as well deal with it here. The first mention made by Major Hehir of anything like a trypanosome is contained in his work on Malaria (1891), p. 14,[1] where he states that he met with "trichomonas-like" bodies in six out of his 343 cases and "pyriform" bodies in 39 cases. Of the first form he says: "It remains transparent and structureless throughout, but acquires two or more filamentary processes after leaving the corpuscles. Originally I thought that these were distinct structures and in no way related to the other forms" (i.e., Laveran's bodies). "It may be found in the blood cells or free. In the latter case it soon acquires two flagellae (*sic*), one at each extremity, and sometimes throws out small flagellae from its irregular border." This last clause suggests the undulatory membrane of trypanosomes and monads. Of the pyriform body he says that it possesses "a single active flagella" and that "it varies considerably in size; it is structureless, and remains so, except that after some time mobile pigment granules are seen in it. After a few hours from this period it is set free; ..... it appears to be a misshapen crescent." In thinking that his flagellate bodies issue from the red corpuscles, Major Hehir evidently had the hæmogregarines in mind; but he seems to have dropped this idea in his next publication. The presence of pigment in the pyriform body suggests that it was a malarial gametocyte. The work is illustrated with rough drawings in outline, and those of the trichomonas-like and pyriform bodies (Plate IV., Figs. 3 and 4) may just possibly be meant for trypanosomes. Next year (1892) Major Hehir published a long paper on parasites found in the "blood and excreta in cases of cholera,"[2] and on page 3 mentions finding "trichomonas-like bodies with a wavy border on one side and long tapering flagellæ arising from the extremities." This description might certainly suggest monads as much as trypanosomes; but, on the other hand, some of the drawings of these objects (Plate V., Fig. 3) are distinctly like the latter, especially the one with a vacuole at one end and a flagellum at the other, which certainly seems to be meant to be a trypanosome. With regard to the nomenclature used by Major Hehir for his flagellate organisms (*Trichomonas*), we may remark that there was at one time considerable confusion between the parasite groups of trypanosomes and monads.[3] Both groups have undulatory fringes, or at least lateral flagella, and the number of terminal flagella in the monad group was by no means quickly determined. Lewis[4] at first thought that his trypanosome of rats belonged to the monad group and various names have been given to trypanosomes by various observers, as for instance, *Hæmatomonas* (Mitrophanow) *Herpetomonas* (Saville Kent), and *Trichomonas* (Crookshank, 1890). The last is the name used by Major Hehir in 1891 and 1892. Gruby's name *Trypanosoma* did not come into general use until later; and we cannot therefore object to Major Hehir that he did not use it in his papers under reference. Apart from this it may be argued that he must have been observing trypanosomes whatever his nomenclature was, because organisms of the monad group (e.g., *Cercomonas* Davaine or *Trichomonas* Donné) have not yet been demonstrated with certainty in the blood.

We certainly cannot say definitely that Major Hehir did not find trypanosomes in human blood; but, on the other hand, we should be sorry to admit definitely, on the published evidence, that he did find them. His first paper referred to above[5] describes and figures many objects which he considers to be parasites of malaria but which are more like artifacts and at all events are not admitted by any of the best authorities on malaria. In his paper on the organisms of cholera he gives 15 full-page plates of rough drawings of very singular objects which appear to be zoologically impossible. In 1895 Hankin[6] expressed an opinion that most of Major Hehir's cholera parasites were "nothing but crystals of common salt, ... various kinds of precipitates, fragments of fibrin, altered red or white blood corpuscles, or even masses of bacteria. Next year Major Hehir[7] published another long paper on malaria in which he claims to have found the spores of the malaria parasites in soil and water; to have detected "free flagella" in syphilitic blood; and to have proved that "the Amœba coli is a true flagellated sporozoon." We would add, however, that at one time Major Hehir was considered an authority[8] and his paper on cholera was issued as a special supplement of the *Indian Medical Gazette*. Numerous other papers by him of a nature similar to those we have quoted can be found in the pages of that journal from 1891 up to his reply to Hankin.[9] Since 1897, however, we have seen no further contributions from his pen.

Dr. Alexander Barron (1894).—Dr. Laveran seems to have been the first to draw attention by a brief note in his book "Traité du Paludisme" to a short communication made to the Liverpool Medical Institution by Dr. Barron,[10] then professor of pathology at University College, Liverpool. We transcribe the entire passage as we find it. "December, 6th, 1894.—Dr. Barron related a case of a lady, aged 39, the

[1] Hehir: Microscopical Observations on the Hæmatozoon of Malaria, 1891. Madras: Lawrence Asylum Press.

[2] Hehir: Microscopical Observations on the Blood and Excreta in Cases of Cholera, Indian Medical Gazette, Special Supplement, April, 1892.

[3] See Leukart, Blanchard, and Crookshank's Bacteriology, 1890, p. 407.

[4] Quarterly Journal of Microscopical Science, vol. xix., (2), 1879, p. 109.

[5] Hehir: Microscopical Observations on the Hæmatozoon of Malaria, 1891. Madras: Lawrence Asylum Press.

[6] Hankin: A Contribution to the Etiology of Cholera, Indian Medical Gazette, 1895, p. 207.

[7] Hehir: The Hæmatozoon of Malaria and its Discovery in Water and Soil. THE LANCET, Nov. 28th (p. 1514) and Dec. 5th (p. 1569), 1896.

[8] See, for instance, the translator's preface to Laveran's Du Paludisme, New Sydenham Society, vol. cxlvi., 1893.

[9] Hehir: A Contribution to the Etiological Relations of Cholera (reply to Hankin). Indian Medical Gazette, 1896, p. 264.

[10] Barron: Untitled communication to the Liverpool Medico-Chirurgical Journal, including the Proceedings of the Liverpool Medical Institution, January, 1895, p. 232.

subject of a uterine fibroid, which had ceased to bleed after phlebitis and an attack of influenza, who, in the early part of this year, there being no hæmorrhage of any kind, began to become anæmic and had a peculiar earthy complexion, suggesting possible malignant disease. On examination in August no evidence of any organic disease beyond the fibroid could be found, but the blood contained large numbers of flagellated protozoa, as many as eight or ten in the field of the microscope $\frac{1}{12}$ oil immersion. She was not seen again until October, when she appeared to be, and said she was, perfectly well. No protozoa could be found. She was treated with arsenic, aloes, and iron. No change in diet or surroundings." The note ends here and the minutes of the Liverpool Medical Institution give no additional details. On Jan. 16th, 1902, one of us formally asked the members of the institution whether any of them could throw further light on the subject. The only reply given was one by Professor H. Briggs, who stated that the case was his own and that "Dr. Barron's organism was, in his own opinion, not like Dr. Dutton's specimens." (We may explain that the phrase "Dr. Dutton's specimens" refers to some preparations of the human trypanosomes found by him and Mr. R. M. Forde in the Gambia some weeks previously, as will be presently described.) A short abstract of these proceedings will be found in the *British Medical Journal*.[11] Dr. Barron's case is the more tantalising because, being an expert pathologist, he was not likely to have been misled by artifacts. It will be noted, however, that the parasites were said to be flagellated protozoa; that they were very numerous; that there are no statements regarding their size, form, structure, and zoological affinities, and no drawings of them; and that it is not mentioned whether the patient had ever been in the tropics. Professor Briggs's statement suggests that they were not trypanosomes; and in fact it remains impossible to ascertain what they were.

Dr. Gustav Nepveu (1898).—So far as we know this is the first observer who actually uses the name "trypanosome" for the flagellate organisms which he claims to have found in human blood. His paper[12] has no illustrations and is only a page and a quarter in length; but the author states perfectly definitely in it that he had found trypanosomes in human blood. He begins by remarking that up to the present trypanosomes had been found only in certain animals; but he refers to Dr. Barron's case. He proceeds:

> In 1890, in pursuance of (*à la suite de*) researches made in Algeria on the parasite of malaria I found in the blood of a patient in whom Laverania also were present, conjointly with them, a flagellate organism which was common enough; I counted about three of them in each preparation of 18 mm. square. About this time (see Nepveu: Étude sur les Parasites du Sang chez les Paludiques, 21, 1891, Bulletins et Mémoires de la Société de Biologie) I already gave some of the drawings which I had collected up to that time. I always hoped to be able to complete, by a more detailed study, these first observations; but since then I have found the parasite again only on rare occasions. I therefore decided to give the few details which follow in the hope of drawing the attention of naturalists and physicians, who will be able to complete these researches.
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> This trypanosome shows all the characters of the genus: general form, a colourless homogeneous membrane, of which one of the borders, thinner and more hyaline than the other, is animated by the characteristic undulatory movements. This membrane carries a nucleus and a fine flagellum placed in front, the undulations of which follow each other rapidly.
>
> It is thus that it appeared in Khill (quotidian fever) and in Cabane (pernicious comatose fever). In a third patient, Genestet, I observed organisms which I thought were related to those described under the name of "trypanomones," a form which is, perhaps, only a stage of evolution of trypanosomes. In this patient the organisms were furnished with two flagella at one of their extremities. Labbé [13] has described a trypanomone of this kind.
>
> In more than 200 patients, for the most part malarial, of which I have studied the blood I have found these various forms only in six. Three of these were suffering from quotidian fever (Khill, Langevelde, Bichielli), one from a tertian type of fever (Hendrick), two from pernicious comatose fever (Cabane, Genestet). The seventh observation was made on Dr. X——, who was apparently in good health (larval paludism).
>
> In none of these patients have I observed any symptoms corresponding to this special parasite invasion. They were almost all invaded by the Laverania which dominate in all and always under diverse forms. This seems to be, therefore, a pure and simple coincidence which I think worthy of notice.
>
> In conclusion, the trypanosome ought to be placed among the parasites of the blood of man. I cannot give with all the precision desirable a more complete description of this variety, I therefore do not wish to give it a particular name. It would be better, to begin with, to establish the similarities and differences which I find between this parasite of man and the congeneric ones observed in animals, and to complete first our morphological and evolutive study of it.

This is all. At a cursory glance nothing could be more convincing than this paper; but those who have studied the discoveries of new parasites which are so frequently made (e.g., in epilepsy, goitre, cholera, syphilis, small-pox, &c.) will perhaps wish to inquire further. In the first place, we note that Dr. Nepveu's description of his trypanosome is merely what may be called a generic description and not a specific one; that is, it would apply equally well to almost all the kinds of trypanosomes known. Anyone who has seen the familiar trypanosomes of animals, or has even read an account of them in the text-books, could have written such a description. He gives no measurements and no drawings; he does not inform us (a thing which he might easily have done) which of the many trypanosomes figured in the text-books, and differing in many particulars from each other, most resemble his; and the position of the nucleus, the staining reactions, and the details of movement are not noted. (In the original passage, "*Un noyau et un flagelle mince placé en avant*," the word *placé*, being singular, refers only to *flagelle*.) He does not (in spite of his concluding sentence) make any effort to differentiate his trypanosomes from those of animals. The excuse which he gives for this lack of detail—namely, that he has found the parasite only on rare occasions—is scarcely adequate. Since then the most exact drawings and descriptions have been given from a single case, and yet Dr. Nepveu was not able to give them with the material of six (if not seven) cases. Surely he might have retained some preparations from some of these cases from which photographs or drawings at least could have been made. The reader should note that he expressly denies that his parasites were pathogenetic. This does not accord with what has been found in connexion with the majority of cases recently reported.

It will be observed that in one place he states that in the case of Genestet he had found organisms furnished with two flagella *at one of their extremities*, that these organisms appeared to be allied to those called trypanomonads, "a form which is perhaps only a stage of evolution of the trypanosome," and that "Labbé has described a trypanomone of this kind." It has been gravely contended in favour of Dr. Nepveu's claim that the trypanosome with two flagella is so characteristic an object that it is not likely to have been imagined by him. It is true that trypanosomes undergoing fission have two or more flagella, but as will be seen on reference to the classical works of Rabinowitsch and Kempner, Laveran and Mesnil, Bradford and Plimmer, these flagella are unfortunately *seldom or never at one end*. In fact, each derivative organism has its own flagellum, and the freshly formed flagella are seen at the sides of the parent organism. Dr. Nepveu's remark seems to weaken rather than to support his case, and suggests that he had found, or thought that he had found, some multiflagellate organism such as a monad. Still more unfortunate is his reference to Labbé. On looking at the work of Labbé mentioned we find that his organism certainly had two flagella, but that they are placed *one at each end*. And Labbé does not apply the name "trypanomones" only to this kind but to the whole genus, much less does he give the name to organisms with two flagella at one end, as Dr. Nepveu suggests. The idea that trypanomonads are an earlier stage of trypanosomes is based upon a confusion of Danilewski's which we shall mention again.

Near the beginning of his paper Dr. Nepveu says that his discovery was originally made "*en 1890, à la suite de recherches faites en Algérie*," and that about this time he had already published drawings in the publications of the Société de Biologie. On referring to this article of his[14] we find no drawing which purports to be, or which even clearly denotes, a trypanosome; while the article concludes with the most definite statement that he had not found trypanosomes at all, "in spite of the greatest care." The only justification which appears to exist for his reference to this earlier paper of his is that he claimed in it to have found "numerous characters seeming to indicate the presence of them (the trypanosomes) or, at least, of hæmatozoa like them" (p. 50)—a very different matter. By a close study of this and of a succeeding paper of Dr. Nepveu we find, in fact, that he has discovered many other parasites besides trypanosomes. This paper of 1891 is headed "Par M. le Professeur G. Nepveu de Marseille."

[11] Brit. Med. Jour., 1902, vol. i., p. 206.

[12] Nepveu: Sur un Trypanosome dans le Sang de l'Homme. Comptes Rendus et Mémoires de la Société de Biologie, 1898, p. 1172.

[13] Bulletin de la Société Zoologique de France, 2, xvi., pp. 229-231, 1891. (Author's reference.)

[14] Nepveu: Étude sur les Parasites du Sang chez les Paludiques, Comptes Rendus et Mémoires de la Société de Biologie, 1891, p. 39.

He begins by setting forth that the researches described by him were made in Algeria in the summer of 1888 and in August, 1890 (the latter apparently being the researches during which, as he claims in his article of 1898, he discovered the human trypanosome). He then passes in review all the parasitic forms which he has observed in the blood of malaria patients, but insists only on the points which he believes to be new (recalling a similar statement by Major Hehir). These parasitic forms are certainly as novel as they are numerous. They consist of "*algues inférieures et schizomycètes*" and of "*infusoires flagellés et sporozoaires*." By the flagellate infusoria he means (p. 48) Laveran's parasites which were then often thought to be of this nature. Of the former class he discovers "*masses zoogléiques*" floating in great numbers in the blood of almost all the pernicious cases and disappearing on recovery; a microbacillus; a "*bactérien en biscuit*" which occurs not only in the blood of cases of malaria but in their stools and in the water of pits reputed to be malarious; "*bactériens en flotteurs*"; also an "*algue véritable*" which demonstrates its existence in the blood by developing in (apparently) sealed specimens; also *spirilla* which are generally fixed to the red corpuscles—"they therefore recall the bodies described by Laveran under the name of spherical bodies with flagella" (*sic*); also a "*streptocoque paludique*"; also a "*bactérie caréniforme*" which is furnished at its two extremities with long lashes perpendicular to its axis and which suddenly transforms itself into a crescent; also a "*bactérie éruçante*" which he says has a "vague resemblance to the caterpillar of our gardens" and which has "singularly perplexed" the author because it may either be "a distinct species or a phase of the coccidium paludicum (*sic*) or a schizomycete." A similar body was found in the portal vein.

In connexion with the "*infusoires flagellés*" the author describes what he thinks are Laveran's parasites. He begins with the spores, of which he has been able to count 20 in a single cell of a "villosité intestinale." They remain quiet for a time, to the number of four, five, or six, attached to a single corpuscle, but later give evidence of their existence by producing "formidable accidents." He refers especially to those of the larger hæmamœbæ which take the form of a starfish. One finds this free in serum, "animated with movements so rapid that it was very difficult to seize its form in an exact manner." There are other "*amiboïdes bien curieux*" which have four branches but which appear to lose the fourth foot when seen in profile (*sic*). He also describes some very singular "*corps vésiculeux*." We note especially the "*corps claviforme*" and the "*corps en gaurde*." Three of the latter were found fixed on the same corpuscle and had the appearance of gorged leeches or even of *Cysticercus cellulosæ*. The author also describes finding in the milk of two nurses an organism with the form of a retort. All these forms, including certain "*vésicules à queue*" and "*vésicules en larmes bataviques*," are, according to the author, "*très probablement des formes de transition très voisines de celles du trypanosome.*" On p. 50 he says that he is convinced that they "*rapprochent beaucoup de certaines grégarines, de certaines coccides*," but that he is unable to determine exactly their phases and much less their species. Nevertheless, he thinks that they represent "*le stade sphérique ou la période de segmentation du trypanosome.*" Why so, he does not explain. The figures of these bodies (Figs. 3, 12, and 23) resemble nothing that we know of in connexion with trypanosomes, or, indeed, with anything else. It is unnecessary to deal with his descriptions of Laveran's crescents and his so-called "flagellate bodies" except to note that the latter are "almost always fixed inside the red corpuscles," which is of course seldom, if ever, the case. He describes three kinds of crescents. Fig. 31 is like these bodies, but Fig. 16 distinctly represents fragments of red corpuscles. He finds free flagella very frequently (as Major Hehir does). Some of his *corps flagellés* are triangular with a flagellum at each angle (Figs. 17 and 18). One of these (Fig. 17) is the only one of the drawings which presents the smallest likeness to a trypanosome; but on reference to the text (p. 48, paragraphs 4, 9, and 10) it appears to be one of Laveran's flagellate bodies of the triangular pattern.

Lest it be pretended that Dr. Nepveu has here drawn a real trypanosome we may remark that Fig. 17 represents a long narrow body with two flagella, with knobs at their ends, issuing from one extremity, and (?) a third flagellum at the other extremity. Now the adult trypanosome is certainly long and narrow but has only one flagellum; while the fission forms certainly may have two or more flagella, but are broad and generally partially divided objects with the flagella issuing from the sides—quite different, in fact, from the figure. But the matter is finally decided by the presence of the little knobs at the end of the flagella in the illustration. Dr. Nepveu had evidently read of the enlargement often seen at the end of Laveran's so-called flagellum, and consequently gives such an enlargement to all his figures of flagellate bodies (Figs. 17 and 18) and refers to it in his text as *une petite vésicule terminale*. Now the flagellum of the trypanosome never possesses an enlargement of this kind. Hence he was clearly not drawing a trypanosome. His other flagellate bodies strongly remind us of some of Major Hehir's drawings and are probably blood plates with filaments of fibrin attached. It is impossible to know what he means by his *corps vermiformes*. One would suspect filariæ but for the illustration, which suggests nothing of the kind. The illustrations of this work consist of a page of drawings in outline, roughly scratched by the point of a pen. They are very similar to those of Major Hehir; and most of them probably represent exactly the same objects—namely, artifacts, blood plates, fibrin, vacuoles, and adventitious bodies.

As we have already mentioned, he says near the end of his work: "Je n'ai jamais pu trouver, malgré le plus grand soin, la trypanomonade ou le trypanosome de Danilewski, mais certainement des caractères assez nombreux semblent en indiquer cependant la présence, ou tout au moins la présence d'un hématozoaire très voisin." This passage speaks for itself. It has been suggested that by "*le trypanosome de Danilewski*" Dr. Nepveu meant a particular species of trypanosome which he could not find; but this reading is impossible because Danilewski mentioned many kinds of trypanosomes found in many animals. Nepveu evidently meant that he could not find trypanomonads or trypanosomes such as Danilewski had described. (We may explain that the name *Trypanomonas* was at one time given by Danilewski to Lewis's trypanosome of the rat in order to distinguish it from the trypanosome of frogs. He thought that the former is an immature form of the latter,[15] or at least a young trypanosome, and Dr. Nepveu seems to have some confused remembrance of this erroneous hypothesis. We have already spoken of Labbé's use of the word *Trypanomonas*.) Reviewing this paper of Dr. Nepveu we see that he expressly denies in it having ever found trypanosomes in his researches of 1888 and 1890. He claims only to have found "characters which indicate the presence" of trypanosomes, but he gives no evidence whatever that the objects he refers to have any connexion with trypanosomes, or, indeed, with any other parasite. In fact, the whole paper suggests that, with the exception perhaps of Laveran's crescents, he was not describing true parasitic organisms at all, but simply a series of artifacts.

A little later, in the same *Comptes Rendus*, Dr. Nepveu[16] records the discovery of yet another couple of parasites—namely, of flagellate bodies included in the leucocytes in cases of malarial fever and of certain polygonal organisms in the same. The illustrations of the former are unlike anything which would now be considered possible; and the discovery has not been confirmed. It is interesting to note, however, that two of the cases in which these organisms occurred (p. 700) have the same names as two of the cases (Genestet and Cabane) in which the author claimed seven years later to have found trypanosomes.[17] They suffered also from the same disease, pernicious fever. The polygonal cells have not been studied except by the author.

After this year (1891) we find a series of short publications by the author in the *Comptes Rendus de la Société de Biologie*. We cannot refer to them here, but would advise the reader who is interested in this matter to look through them. The heading of most of them suggests that Dr. Nepveu was at Marseilles during this period.

We have thus given a brief review of such of Dr. Nepveu's writings as we are acquainted with; and we would advise the reader to study them for himself if he wishes to form an independent opinion regarding them. We would suggest, however, that he study them in conjunction with the writings of Major Hehir and a paper on artifacts in the blood written by one of us (Ross[18]).

[15] See, for instance, Annales de l'Institut Pasteur, 1890, p. 759.
[16] Nepveu: Corps Flagellés inclus dans les Cellules Blanches chez les Paludiques, &c., Comptes Rendus et Memoires de la Société de Biologie, 1891, p. 699.
[17] Nepveu: Sur un Trypanosome dans le Sang de l'Homme, ibid., 1898, p. 1173 (not indexed).
[18] Ross: A List of Natural Appearances in the Blood which have been Mistaken for Forms of the Malaria Parasite, Indian Medical Gazette, 1894, p. 441.

Of course, as with Major Hehir and Dr. Barron, we cannot definitely say that Dr. Nepveu did not find trypanosomes in human blood. Although his paper of 1891 contradicts his statement of 1898, that he discovered them in 1890, yet it is possible that he saw them later. We have no means of judging. The paper of 1898 is so vaguely worded that it is impossible to ascertain from it when and where the observations were made—that is, if they were not all made in Algeria in or before 1890. Beyond this the cases are neither localised nor dated. Are we to suppose that all the cases were found in Algeria in 1890 or that some were found subsequently up to 1898? In the latter event, where were they found? Did Dr. Nepveu return to Algeria after 1890 or did he find the cases in Marseilles or elsewhere? Surely he ought to have given some exact information on these points. Surely, also, considering the large amount of material he possessed in his six or seven cases, and in view of the importance of the discovery which he claims, he ought not to have allowed seven years to elapse before publishing, he ought to have given much more precise details than he did give and he ought to have placed his discovery beyond cavil by demonstrating his organisms to persons capable of judging them. If he did so, where are the facts recorded?

At the same time his various papers fail to convince us that the author possessed any really accurate knowledge even of the literature of trypanosomes, or indeed of malaria. Like the papers of Major Hehir, they suggest that the author was an enthusiastic but inexperienced observer who mistook everything seen under a strong lens for some kind of parasite. If we cannot assure ourselves that these observers did not find flagellate organisms in the blood we certainly cannot, in spite of their statements, feel convinced that they did. It is possible that their flagellate organisms were artifacts, such as many of their other organisms certainly seem to be. There is no good evidence that Major Hehir ever saw his trichomonas-like body and there is no more evidence that Dr. Nepveu ever saw his trypanosome than that he saw flagellate bodies within the leucocytes or numerous curiosities which he mentions as existing in malarial blood. Even if the reader decides to grant these observers the benefit of the doubt he will be forced to consider the difficult question as to which of the two deserves the priority. Certainly Hehir's drawing of 1892 (Plate V., Fig. 3) presents as good an idea of a trypanosome as Dr. Nepveu's very general description of 1898, and was published six years earlier. For our own part, unless some fresh evidence can be produced in their favour, we shall be forced to conclude that the claims of Major Hehir, Dr. Barron, and Dr. Nepveu are all of them, to say the least, very questionable. Laveran and Mesnil have already independently come to the same conclusion regarding those of Dr. Barron and Dr. Nepveu. Referring to their papers of 1894 and 1898, they say, "Jusque dans ces derniers temps on n'avait cité que des cas très douteux de trypanosomes chez l'homme."[17] We have consulted with Dr. Laveran on the subject, and he authorises us to say that he sees no reason for changing this opinion of the papers of Dr. Barron and Dr. Nepveu.

Mr. R. M. Forde and Dr. J. S. Dutton (1901).—This case need not detain us long. The first publication was by Dr. J. S. Dutton.[20] He states that the case in which the parasites were found was admitted into hospital at Bathurst, Gambia, with fever on May 10th, 1901, under the care of the colonial surgeon, Mr. R. M. Forde. The patient's blood was examined by Mr. Forde; and Dr. Dutton says: "Mr. Forde informed me that he saw very many actively moving worm-like bodies whose nature he was unable to ascertain." The patient was now invalided to England and on August 12th entered the Royal Southern Hospital, Liverpool, where he suffered from "three short periods of pyrexia" and other symptoms. Here Dr. Dutton examined his blood for malarial parasites on two occasions, with negative results, and Dr. C. J. Macalister recorded his case. In December the patient arrived in the Gambia again and Mr. Forde asked Dr. Dutton (who also had arrived in the Gambia on a scientific mission) to examine his blood once more. Dr. Dutton expressly admits (p. 455) that this request was made "on account of" Mr. Forde's previous observation of the "actively moving worm-like bodies whose nature he (Mr. Forde) was unable to ascertain." On doing so (Dec. 15th) Dr. Dutton, who had previously found nothing in the patient's blood, now succeeded in detecting unquestionable trypanosomes to the number of only three in three slides.

Such is the history of the discovery as taken from this paper. The rest of the paper gives a close analysis of the symptoms of the case as observed by Mr. Forde, Dr. Macalister, and Dr. Dutton; and a detailed description of the parasites, including their form, movement, numbers, size, and staining reactions, as observed by Dr. Dutton during a long study of the subject. He gives also a coloured drawing of the stained parasite and photographs of it and of allied organisms in animals (*T. Lewisi*, *Brucei*, and *equiperdum*); and compares the human parasite, which he names "*T. gambiense*," with these, and also the symptoms produced by it in man with those produced by them in animals. The previous claim of Dr. Nepveu is briefly considered. Charts comparing the temperature in man and in nagana are added. In a footnote at the conclusion of the paper Dr. Dutton states that "since going to press" he has found the same parasites in one out of 115 dried blood films taken from native children in the Gambia during his visit there.

We should add that shortly after the discovery was made both Dr. Dutton and the patient returned to England. Here Dr. Dutton, Dr. H. E. Annett, and Mr. J. L. Todd continued the study of the case, both of the parasites and of the symptoms. The parasites were exhibited at the Royal Society, and at Liverpool in connexion with the annual meeting of the British Medical Association; and both the case and the parasites were shown to many others, including ourselves. Dr. Dutton contributed another paper on the subject to the British Medical Association, July 29th, 1902.[21] This is practically a repetition of the former paper, except that the consideration of Dr. Nepveu's claim is omitted.

Meantime Mr. Forde, who had first seen the parasites in May, 1901, seems to have published nothing on the subject. On Sept. 1st, 1902, however, a paper from his pen[22] appeared giving some of the clinical details of the case during the periods when the patient was under his care in 1901. He substantiates Dr. Dutton's account of the discovery, but adds that when he (Mr. Forde) first saw the parasites he "prematurely pronounced" them to be "a species of filaria"; that this conclusion "became doubtful after repeated observations of the parasite"; that he showed the case to Dr. Dutton; and that Dr. Dutton "at once recognised" "the parasite" "as a species of trypanosoma." Mr. Forde adds that it was also Dr. Dutton who recognised the peculiar undulant nature of the fever.

The leading facts appear to be clear and undisputed. Later, however, Mr. Forde[23] published a letter in which he seems to claim having made the discovery by himself in May, 1901, when he first saw the parasites. This view may be contested, as we have his own words to the effect that he then thought the parasites were a species of filaria and that it was Dr. Dutton who recognised them to be a species of trypanosoma. We may note, also, that he published nothing on the subject (so far as we know) until 15 months after his first observation, and three months after Dr. Dutton's first publication. On the other hand, it was undoubtedly Mr. Forde who drew Dr. Dutton's attention to the existence of parasites in the case. In the circumstances we think that most people will consent to the opinion that the names of Mr. Forde and Dr. Dutton ought to be associated in the history of the discovery. Dr. Macalister also contributed some clinical details. Whatever the claims of others may be it was certainly Dr. Dutton who first established the existence of trypanosomes in human beings in a manner fully satisfactory to science, and it was also he who was the first to give adequate descriptions and illustrations of the new parasite and a comparison of the symptoms with those of other forms of trypanosomatosis in animals. The case of Mr. Forde and Dr. Dutton has been so thoroughly investigated, especially by the latter, and is so well attested, that it is unnecessary to examine the confirmations of the discovery which have already been made public—namely, a case of Dr. Habershon, Dr. Manson, and Mr. Daniels, and some fresh cases of Dr. Dutton and Dr. Todd.[24]

[17] Laveran and Mesnil: Des Maladies à Trypanosomes, leur Répartition à la Surface du Globe, Janus, Mars 15, 1902.

[20] Dutton: Preliminary Note upon a Trypanosome occurring in the Blood of Man, Thompson-Yates Laboratory Reports, May, 1902.

[21] Dutton: Note on a Trypanosoma occurring in the Blood of Man, Brit. Med. Jour., 1902, vol. ii., p. 881.

[22] Forde: Some Clinical Notes on a European Patient in whose Blood a Trypanosoma was observed, Journal of Tropical Medicine, Sept. 1st, 1902.

[23] Forde: The Discovery of the Human Trypanosoma, Brit. Med. Jour., Nov. 29th, 1902.

[24] Editorial in the Brit. Med. Journ., 1902, vol. ii., p. 1452, describing a case of Dr. Habershon, Dr. Manson, and Mr. Daniels. Dutton and Todd: Brit. Med. Jour., Feb. 7th, 1903.

We may, perhaps, be justified in concluding this discussion by some words of Charles Darwin.[25] "I feel sure," he writes to a correspondent, "as long as species-mongers have their vanity tickled by seeing their own names appended to a species, because they miserably described it in two or three lines, we shall have the same vast amount of bad work as at present and which is enough to dishearten any man who is willing to work out any branch with care and time." In order to obtain the credit for an observation much more is necessary than just to record once in print that it has been made, without taking any trouble to convince others, without publishing accurate descriptions or drawings, or even without giving a full account of the circumstances under which the observation was made. Of course, science cannot accept this sort of thing; to do so would be to admit every kind of pretender. For instance, anyone can record a statement to the effect that he has seen a new parasite, and can even furnish a good general description of it drawn from descriptions of allied parasites found in other hosts and given in the text-books. That such a thing is done with intent to deceive is happily not very likely; but unfortunately it can often be done unconsciously by inexperienced students (especially in connexion with minute parasites of the blood), who having found some object which seems to them to accord with the text-book description, rush into print, full of ardour for their new discovery. A timely remembrance of the words of Darwin would not only save many such from the disappointment of finding their claims rejected, but would also guard the interests of "the man who is willing to work out any branch with care and time."

ON THE PERMANENT CARE OF THE FEEBLE-MINDED.[1]

BY MRS. ELLEN F. PINSENT,
CHAIRMAN OF THE AFTER-CARE COMMITTEE OF THE BIRMINGHAM SCHOOL BOARD.

I HAVE some hesitation in speaking of the value of the work of an after-care committee when the only one of which I know anything has been in existence so short a time, but I may succeed in giving some idea of the difficulties with which it is necessary to contend. The first important question is as to the advisability of establishing such committees. On this point I have no hesitation. I am most anxious to see them established wherever there are classes for the mentally deficient. I think that all those who have had anything to do with these children are agreed that there is no stated age when they can be considered grown up or treated as responsible adults. Many, I believe most, are as much children at 16 years of age as they were at 10; the only difference being that, as at 16 they are capable of doing greater harm, they therefore require greater care when they reach that more dangerous age. I do not think it possible that much lasting help can be given by members of after-care committees in the majority of cases, and yet the children in these very cases are just those who are absolutely unfit to face the world without permanent care.

When we started an after-care committee in Birmingham our immediate aim was to find situations for those children who left the special classes capable of work, and also to see if there was anything that could be done for the hopeless cases where the children were found to be incapable of work. This, I say, was the immediate object but it was by no means the most important in the minds of those who formed the committee. It was established first and foremost as an investigation committee with the object of estimating the worth of the laborious and expensive education given in special classes. It was hoped that if for some years after they left school the careers of these unfortunate children were closely watched and accurately reported the committee would then have some facts to place before educationalists which would enable them to judge how far the special class really meets the requirements of mentally deficient children. We hope, too, to be able to show how many of those who leave special classes ultimately become self-supporting or even partially self-supporting. It is too early in our history to place any great confidence in our figures, but such as they are I will give them to you.

We had 48 children on our list to begin with and of these we found it impossible to trace 13. This, I hope, is a larger percentage than will ever occur again. Many of these children had left school for some years before we began work. Now that each case is taken up at once and constantly watched we shall have a better chance of tracing them, though I am afraid we shall always lose a certain number. The parents are perpetually flitting, and as there are so few after-care committees, when a child goes to another town we have no organisation to whom to hand him or her over. We feel this a good deal in Birmingham; for, although our children may only go a short distance—to Smethwick, Aston, Handsworth, or Yardley, which are all in reality part of one great population—yet these children are often completely lost, as none of these places have even special classes, much less after-care committees. Thus, some years' work in a special class may be rendered almost useless from the fact that the child's parents have moved out of our school board district.

Before passing on I should like to point out that the children who are perpetually wandering are almost always the offspring of low and degraded parents and probably if they were found would swell the numbers of the incapable and hopeless. This should not be forgotten when conclusions are drawn from our statistics. It also points to the advisability of such children being placed in a boarding school where they could be kept under permanent control and not left to the chance of their parents remaining in the neighbourhood of a special class or of an after-care committee. There can be no doubt that many parents of feeble-minded children, belonging as they so often do to the street-hawker and irregularly employed class, are even more migratory than the rest of town populations. This is one of our most disheartening difficulties; for, unless the after-care association can establish permanent custodial homes it must always lose a large percentage of cases, and every lost case may mean, and generally does mean, a future generation of feeble-minded children.

Of the 35 remaining persons 16 are at work. The average age of these 16 persons is 17 years, and the average weekly wage which they earn is 5*s.* 9*d.*—one boy earns 10*s.* a week. We have not at present been established long enough to know how often these persons change their situations, or the amount of time wasted during such changes, which if considerable would, of course, lower their weekly wage. But, speaking generally, I believe that our investigations will show that they are perpetually changing their situations. Certainly of the four cases which have come under my own eye only one is satisfactory; one person is too bad to work at all; one never keeps his situation more than a few weeks and the other never more than a few months. Neither of the latter will ever be capable of self-support after their near relations die and I think it probable that both will find their way into gaol. Here they will cost at least as much as in an industrial colony where I feel sure that working under supervision both could have contributed largely to their own support. These cases I believe to be typical of most of the 16. A small percentage will get along passably, but by far the greater number will eventually be found in the prison, the penitentiary, or the workhouse. The next seven children on our list, although capable of work, are out of work. This you will notice is nearly one-third of the total number of cases in which the subjects are capable of work. Our after-care committee will probably get them work of some kind, but by that time others will have lost their situations and I fancy our books will show that this is about the usual proportion. Our utmost efforts will probably prove inadequate, there will always remain a third doing nothing. If those who fail to keep their situations were placed in industrial colonies they would work continously with greater profit both to themselves and to society at large.

I have now accounted for 23 out of our 35 children. Of the remaining 12 one has died, five are so bad that they should be placed at once in some asylum or home, and six are being looked after fairly well at home but are incapable of work and will have to be provided for on the death of the mother. I have said fairly well looked after and by this I mean that they are clothed, fed, and kept passably clean, but I do not believe for a minute that they are protected from all chance of moral harm. Some of them are girls who should never be

[25] F. Darwin: Charles Darwin, p. 159. London: John Murray, 1902.

[1] A paper read before a Conference held at Leicester on Nov. 26th, 1902, upon the Treatment of the Mentally Defective.

allowed out of the house by themselves, instead of which I know that they are prone to wander alone for hours in the streets. A poor mother with other children cannot give her whole time and strength to the weak-minded member of the family. The child must take her chance during the busy hours of the day. These girls are often of a clinging and affectionate disposition and will follow any man who chooses to speak kindly to them We who pay the rates and taxes will have to support these girls in the end. Would it not be wiser to do so at once, instead of waiting until they have produced others for us and our children to support? Once more it is for permanent industrial and custodial homes which we must work and the chief duty of an after-care committee is to collect the evidence which will demonstrate their necessity. No after-care committee, however vigilant its members, can watch over the feeble-minded at all hours of the day and keep them from harm; but what an after-care committee *can* do is to show the public the result of its investigations and go on publishing facts until ratepayers, Poor-law guardians, and city councillors are convinced.

I am very anxious to take this opportunity of approaching the Poor-law guardians on the subject of the worst cases with which after-care committees will have to deal. I do this not at all in a spirit of captious criticism—for I recognise fully the enormous difficulties with which the administrators of the Poor-law have to deal—but I am really anxious to come to a better understanding. The Poor-law should, I think, be a help to us, but at present it is only a difficulty. It seems to me that we are pulling in exactly opposite directions and until we pull together I despair of any good results. It appears to me that it is the policy of the Poor-law authorities to keep cases of extreme mental deficiency and imbecility out of the workhouse as long as possible. Our policy is to do all we can to persuade parents to avail themselves of the workhouse as a refuge, generally the only possible one, for their uncontrollable children. I have failed to find any asylum or home within the means of poor parents and therefore when a case is pressing the Poor-law is our only hope, and I find that when, generally with much difficulty, we have persuaded the parents to apply it is quite impossible to predict what will happen. I will give you two puzzling cases.

CASE 1.—This is a girl about ten years old. Her father is living and she has a stepmother. Her father earns from 30*s.* to 35*s.* a week and would be glad to pay something for her maintenance if she could be placed in some home. She is absolutely uncontrollable. I have seen her father obliged to hold her still by main force while she struggled and fought. One day she put the cat on the fire, another she undressed herself in the street. Her stepmother cannot take her out as she is uncontrollable, and therefore when the necessary shopping has to be done she is tied to the kitchen table and left to howl. The medical superintendent of the school board turned her out of a special class as an imbecile and as being incapable of benefiting by instruction therein. The after-care committee could find no home or asylum within the parents' means and therefore with some difficulty it persuaded the parents to apply to the guardians. A medical man was sent by the Poor-law authorities to examine the child. I suppose he must have found her in a quiet mood, for he said that she was not imbecile and refused to sign the necessary certificate. After a good deal of further trouble on the part of the lady who undertook this case I understand it was suggested by the guardians that the child should be sent to one of their cottage homes. Here she would be one of 19 normal children. I can well imagine the life she would have led the unfortunate foster-mother in charge of the cottage home. However, luckily for her and the other children under her charge, the girl's father refuses to pay the 7*s.* a week which the guardians asked and which he considers, justly I think, more than he can afford. When she has half killed some neighbour's child we may succeed in getting her removed. Burning the cat, unfortunately, was not enough. But is not the whole thing an extraordinary muddle? Medical officer No. 1 says the child is an imbecile, while medical officer No. 2 says she is not an imbecile. The school board authorities say she is too bad even for a special class, while the Poor-law authorities say that she is fit to mix with normal children.

CASE 2.—This is a girl, about 16 years of age, nearly blind, nearly deaf, and nearly dumb, very feeble-minded, and violent-tempered with the other children. Her parents are unable to control her, she escapes from the house and wanders in the street, and she has locked the baby up in the cellar, but she also has never done anything to justify her forcible removal. A member of the after-care committee after infinite trouble persuaded the parents to apply to the guardians. The medical man in this case, which to the lay mind is certainly not so pronounced as the other, signed the certificate and the child was taken to the city asylum. The committee breathed a sigh of relief—once more she was out of harm's way. Presently the authorities settled that the parents should contribute 2*s.* 6*d.* a week. The father was proved to have earned an average wage of £2 7*s.* 6*d.* a week for the last two months. No one could say that the contribution was too much, and, of course, he should have been glad to pay it; but he refused and the child was brought back to the frightful risks of her former life. We could not prevent it—we are powerless until the child is proved to be dangerous. The liberty of the subject must not be interfered with and the parent must have his way. This is surely one of the points on which we need fresh legislation.

Before passing on I should like to emphasise two things illustrated by these cases. First, the extraordinary variety of medical opinion as to what constitutes an imbecile, and secondly the extraordinary variety of payments demanded by the Poor-law authorities. From one man earning 35*s.* a week they ask 7*s.* and from another earning £2 7*s.* 6*d.* they ask only 2*s.* 6*d.* It is a little perplexing to have to work with such variable quantities.

It is not surprising that the Poor-law authorities wish to keep these children out of the workhouses, as they have no proper provision for them. They might, of course, send them away to idiot asylums where they could be properly graded and looked after, but this is extremely expensive. Sometimes it is done, but the more usual plan is to place them in the epileptic ward of the infirmary where they are associated with all degrees of mental deficiency, from epileptics whose intellect is normal to raving idiots. In this case one has most pity for the epileptics whose intellects are still normal, though at the same time it is not ideal for feeble-minded children. I know of one boy on our after-care list who is said to be trainable to some extent and who is now in the infirmary of a workhouse spending his time in imitating the cries and gestures of two or three male idiots who are inmates of the same ward. If unions were to combine to have separate graded establishments for such cases there would be no difficulty in finding sufficient numbers to render the grading satisfactory. But I am told that there is a difficulty about getting the Government grant of 3*s.* a head, as many of these children could not be certified under the Lunacy Acts. Here, again, it would seem as if the only remedy lay in fresh legislation on the subject.

Before concluding I should like to mention the last bit of work recently undertaken by the Birmingham After-Care Committee. It has been known to us for some time that there were a large number of idiots, imbeciles, epileptics, and feeble-minded persons who had never passed through special classes and who were not on our original after-care list. We made it our business to collect, with the help of the school board officials and others, a list of these cases. When we had obtained a sufficient number it was thought advisable to appoint a sub-committee consisting almost entirely of medical men who have most kindly undertaken to examine and to report on every case. In this way we hope at no great interval to be in a position to inform the city council of the extent to which the evil exists. We shall, at any rate, know the facts, and, more than this, we shall have classified the cases under various heads, which should help us later if it is found possible to do anything for these dangerous and unfortunate members of society. I will give you the heads under which we propose to classify our cases. They fall naturally into two main divisions, those of school age and those over school age.

Class A.—Those of school age (i.e., under 16 years). These again sub-divide into: 1. Those suitable for special classes for the feeble-minded. These, of course, have already been dealt with by the school board, although our committee of medical men is finding out some few cases which have hitherto escaped notice. 2. Cases which for various reasons could be better dealt with in boarding-schools for the mentally deficient. Such cases have been recognised by the London School Board and classified under the following heads: (*a*) mentally defective children who but for their defect would be committed to industrial or truant schools; (*b*) mentally defective children living in very bad homes; (*c*) mentally defective children whose regular attendance it

is not possible to secure at day-schools; (*d*) mentally defective children living so far from any special day-school that it would be impossible for them to attend; and (*e*) certain defective children known as "moral defectives." 3. Epileptics. 4. Epileptics who are also feeble-minded. 5. Feeble-minded children who are also crippled, blind, or deaf-mute. 6. Imbeciles and idiots.

Class B.—Those over school age, including the following sub-divisions: (1) mentally deficient but capable of industrial work under supervision—i.e., cases for a permanent industrial colony; (2) mentally deficient and incapable of work—i.e., cases for a permanent colony; (3) epileptics who are capable of work in a colony; (4) feeble-minded epileptics; (5) feeble-minded persons who are also crippled, blind, or deaf-mutes; and (6) imbeciles and idiots.

The ultimate aim of this inquiry is, of course, to collect evidence showing the necessity for boarding schools to be supplemented by permanent industrial colonies or permanent custodial homes to which children who were unfit to face life on their own responsibility could be transferred from such boarding schools. In this way they would never be allowed the liberty which they can only misuse to their own degradation and to the degradation of the society in which they live. Theoretically it may be hard to decide what degree of mental deficiency renders people morally irresponsible for their actions, but when it comes to the practical side, the question as to which cases will ever become independent of help and self-supporting, it is not nearly so hard a matter. Let us face the worst that might happen. Let us grant that a very small percentage of the feeble-minded would be kept in a colony who might have gone through life without serious harm to themselves or to others and then let us weigh this evil—for I grant it would be an evil—against the infinite amount of suffering and moral degradation caused by the fact that people of defective intellect are allowed the full liberty of responsible citizens, that they are allowed to make the lives of their own families miserable and to leave behind them others as defective as themselves. Ultimately such people do have some restriction or other put upon their personal liberty; too often in gaol, too often in penitentiaries, and most often, perhaps, in the workhouse. We are only asking for restriction a few years sooner and we offer, instead of the usual story of crime, shame, and pauperism, that these years should be spent happily and safely and filled with pleasant and honest labour.

As to the exact plan of action which our committee will think it wise to adopt I cannot speak. The difficulties ahead make one almost despair. Would it be better to try to win the local authorities first or to appeal direct to the Government? Is it primarily a matter for the guardians or for the city councils? Might we not have better hopes of success if both those authorities combined and went together to the Local Government Board? Among all the suggestions for the treatment of this evil there is only one on which I have a really clear opinion and this is not very helpful, as it is merely negative. I should like, if possible, to avoid any appeal to private charity. Any consideration of the numbers we have to deal with must convince us that private charity would be entirely unable to cope with them. This is an affair which touches the welfare of the nation and only the nation can deal adequately with it. Asylums and homes supported by private charity are only a mitigation and can never provide for all. As long as we refuse to deal with the whole question feeble-mindedness will go on increasing. It is probable that private charity postpones the day when the State will see the necessity of stepping in. Private charity has been at work for many years and the evil is still increasing. On the other hand, there can be little doubt that a thorough and complete system of State intervention would lead to a steady decrease in the numbers of the mentally deficient.

Harborne, Birmingham.

WATER-SUPPLY OF TEIGNMOUTH.—At the meeting of the Teignmouth district council held on Feb. 3rd Dr. F. C. H. Piggott, the medical officer of health, presented a report on the water-supply of the town. He stated that the water from the Coombe brook (which is supplied to about half the inhabitants of Teignmouth) after analysis by the Clinical Research Association was declared to be "unfit for drinking."

ANEURYSM OF THE ASCENDING ARCH OF THE AORTA IN A SMALL BOY: A POST-MORTEM SURPRISE.

BY ALFRED C. JORDAN, M.D. CANTAB.

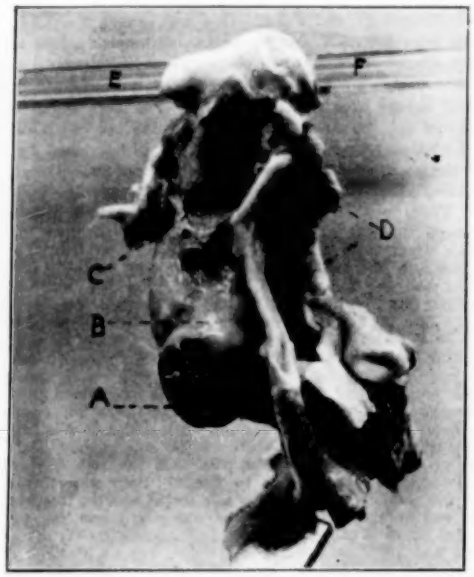
A BOY, aged six and a half years, was brought to consult me on Sept. 8th, 1902, for headache and vomiting, and he had a discharge from both ears. These symptoms had begun two days previously. Unlike his brothers and sisters, he had always been a delicate child. The ears began to discharge for the first time before he was two years old after whooping-cough. He was a pale, ill-nourished boy with the rough skin which is characteristic of malnutrition. He complained of headache, chiefly felt above the right ear. There was no tenderness over the mastoid process or above the ear. There was some muco-purulent discharge from both ears. His temperature was 101° F. On the 9th the headache was worse; the vomiting continued and the temperature was 102°. On the 10th the vomiting had almost ceased but the temperature was 103°. On the 13th the following note was made. The temperature was 99 4°; the headache was less severe; there were no vomiting, no fits, or twitching; the bowels were constipated; the pulse was regular, not slow. The pupils were small, equal, and reacted well to light and to accommodation; consensual light reflex was normal; there was no squint. The heart and lungs were normal. The abdomen was full; it was not tense or tender; there was no enlargement of the liver or spleen. The boy was pale. On the 14th the left knee began to swell and to be painful; there was effusion into the joint. There was no sore-throat and the temperature was normal. The headache was slight and the boy seemed better in other respects. The specific gravity of the urine was 1015, acid and clear; there was no albumin or sugar. On the 16th Dr. Howard Tooth saw the boy with me. The optic discs and the fundi were normal. He was given ten-grain doses of sodium salicylate three times a day on the supposition that the swelling of the knee was of the nature of acute rheumatism. On the 20th the temperature remained normal. The effusion into the left knee-joint, which had continued up to the 18th, had now begun to subside. The joint was far less painful and tender than on the 16th. On the 23rd he was free from headache and his temperature remained normal. The knee was painless, though the effusion had not yet entirely cleared up. There was still some discharge from the ears. He was sitting up playing with his toys. He continued to improve during the next three days. The knee became normal. On the 26th he was up, playing and laughing, when suddenly he turned pale and died.

To summarise the chief points of the case: a boy, aged six and a half years, who had been the subject of otitis media since babyhood, began to suffer with headache, vomiting, and fever on Sept. 6th. These symptoms grew worse until the 10th, then they began to subside, and on the 20th they left him. On the 14th the left knee began to swell. Effusion into the joint increased up to the 18th and then began to diminish, the knee being normal at the time of his death. On the 26th, when he was apparently convalescent, he suddenly died.

Necropsy.—At the post-mortem examination the brain and meninges were quite normal in all respects. The tympanic cavities contained muco-purulent fluid, the right containing more than the left. In the left lateral sinus there was an ante-mortem clot, white and tough, loosely adherent. The lining of the sinus was smooth and healthy. In the abdomen everything was normal. On removing the sternum the pericardium was seen to be distended; on incising it a quantity of blood-stained serum escaped and the heart was found to be enveloped in a thick coat of dark blood clot. On removing this the cause of the boy's sudden death was at once evident, for on the ascending arch of the aorta, on its anterior surface, was a sacculated, light-red swelling, in the centre of which was a horizontal slit-like opening (Fig. 1). On the corresponding point of the inner surface of the aorta was a triangular opening with sharp edges (Fig. 2). The triangular flap, attached along the shortest side of the triangle, was pushed outward into the lumen of the sac. Evidently a small opening in the intima had first

occurred and blood had leaked through it, causing a limited bulging of the fibrous coat of the aorta. The intima had thus lost the support of the fibrous coat and some slight exertion had led to a sudden enlargement of the opening—a tear, in fact, which would be immediately followed by the bursting of the fibrous saccule and fatal hæmorrhage into the pericardium. The aorta itself, even in the vicinity of the opening, was perfectly normal, and the valves and cavities of the heart, as well as the heart muscle, were quite healthy. There were no vegetations or other signs of the action of micro-organisms. The lungs and air passages were natural. The heart had been repeatedly examined during life with the special object of excluding ulcerative endocarditis, and there had never been a murmur at any part of the cardiac area. There had been no impulse over the sternum, and the superficial and deep areas of dulness had been normal. The apex beat had been in its normal position.

FIG. 1.



A, Sacculated swelling with linear rupture. B, Ascending aorta. C, Reflexion of pericardium. D, Pulmonary artery laid open. E and F, Great vessels.

FIG. 2.

A, Triangular perforation in ascending aorta. B, Aortic semilunar valves. C, Muscle and endocardium of the left ventricle. D, Pulmonary artery laid open. E and F, Great vessels.

Many questions arise in the endeavour to explain the occurrence of an opening into a child's intra-pericardial aorta. Was it traumatic? Had the boy received a blow, or had he fallen and a stray pin or nail entered his aorta? There was no history of any such occurrence and no sign of any skin wound or puncture. Moreover, the object must have penetrated his sternum, since the swelling was situated immediately behind the sternum. The inner aspect of the sternum was examined most carefully and there was not the least roughness or irregularity of any sort. One naturally looks for some connexion between this aortic perforation and the middle-ear trouble for which the boy was under treatment. The occurrence of an effusion into the left knee seemed to show that there had been some dissemination of septic material into the general circulation. The suggestion arises that there had been a small septic ulcer in the aorta the base of which had given way. In that case it is hardly possible that the aortic and mitral valves, the cavities of the heart, and the rest of the aorta with its main branches should have remained entirely healthy. Dr. Tooth considers the aneurysm to have been undoubtedly of pyæmic origin, and the knee trouble to have been of the same nature. The suggestion that the middle-ear suppuration was the beginning of the train of events seems to him the only reasonable one.

The specimen has been placed in the museum of St. Bartholomew's Hospital. Dr. F. W. Andrewes, pathologist to the hospital and curator of the museum, regards it as an acute infective aneurysm and suggests that, in the absence of any other evidence as to its causation, it may have originated as a localised septic aortitis, possibly due to a minute pyæmic embolus in one of the vasa vasorum. An embolus of this nature might occur in any small artery; in the present case it happened to occur in a very unusual situation and apparently in this one situation only.

I publish these notes in the hope that they may bring to the mind of some reader a parallel instance or an explanation which will throw light on the present case.

Leadenhall-street, E.C.

A CASE OF HÆMOPHILIA ILLUSTRATING THE VALUE OF CALCIUM CHLORIDE AS A LOCAL STYPTIC.

BY T. WILSON PARRY, M.A., M.B., B.C. CANTAB.

IN the early morning of Sept. 4th I was called to a boy, aged seven years and four months, who was bleeding from the mouth. On examination, blood was seen to be welling up between the left lower first permanent molar and the temporary molar lying immediately in front of it, the latter being decayed on its distal surface. Both of these teeth were firmly fixed. There was rapid oozing from the cleft and judging by the considerable clot that had been already evacuated from the mouth as well as by what still remained, there had evidently been continuous bleeding during the night. So profuse and persistent did the hæmorrhage eventually become that the likelihood of there being more than one bleeding point was suspected and, accordingly, in consultation with my partner, Dr. D. McB. Greig, a careful examination of the child's mouth and throat was made under an anæsthetic but no other source of bleeding than that already mentioned could be found. The inter-dental fissure from which the blood flowed was so small that it was with great difficulty that the smallest fragment of wool could be packed into it. During the next four days, however, I plugged it as efficiently as possible with minute pledgets of wool steeped in styptics of unimpeachable repute, to wit,

alum, tannic acid, turpentine, perchloride of iron, and adrenalin chloride. The bleeding would sometimes stop for a quarter of an hour after the little cavity had been plugged, but would soon burst out afresh as vigorously as ever. The best result was undoubtedly obtained from adrenalin chloride (1 in 1000, Parke, Davis and Co.), the bleeding being diminished during its employment but not arrested. On the evening of the 8th, when the boy had been bleeding almost continually for five days and nights and had become anæmic and restless, yawning and sighing at times, with a variable pulse sometimes irregular in character and at other times as rapid as 120 per minute, I asked Mr. Bilton Pollard to meet me in consultation. On hearing of the various styptics already employed Mr. Pollard suggested a trial of calcium chloride. A small pledget of wool was steeped in some of this solution (30 grains to an ounce) and then inserted into the little cavity. This was shortly removed and replaced by another, and yet again by several others, until the removed plug showed no blood-stain whatever. A final plug was, of course, left *in situ*. The cessation of bleeding was now complete. The nurse in attendance was then ordered to moisten the inserted plug with some fresh solution every 20 minutes. We left the house shortly after 8 P.M. and this treatment was continued for two hours, when the boy fell asleep and did not wake till six o'clock on the following morning, there being no return whatever of the hæmorrhage. When I saw him in the morning the plug was gone, but there was not the slightest return of the bleeding. I bade the nurse continue painting the gums for three days in case a fresh outbreak might manifest itself, but this, however, fortunately, did not occur, no bleeding whatsoever taking place since the first employment of the calcium chloride.

The family to which the patient belonged was of pure Scotch descent and consisted of two boys and a girl. The little patient was the eldest, then came his brother, aged five and a half years, who also was afflicted with hæmophilia, and lastly a girl, aged four and a half years, who, as might be expected, was free from the disease. On the mother's side—and it is, of course, through this branch of the family that we search for a history—there was evidence of the direct heredity of this pitiful complaint, one of her brothers having died from hæmorrhage, at the age of five years and four months, after extraction of a tooth. Till then there was no suspicion that he was afflicted with this malady and it was a standing puzzle how it was that he always "bruised" so easily and sometimes without any apparent cause. The first evidence of any kind in the present case that the parents had of their elder son's bleeding propensity was when he was at the age of six months. He was circumcised at that time and the bleeding was only stopped after several days' duration with some difficulty. Directly he began to walk bruises began to appear, before that time none having occurred. At the age of two and a half years he cut his tongue with a tin toy, and again when a little older he slightly severed the frænum of his upper lip with a piece of hard sharp toast, both of these slight injuries giving rise to hæmorrhage of a troublesome kind. As lately as six weeks previously to this present attack he had some obstinate hæmorrhage, lasting 11 days, in the course of shedding an upper central incisor tooth. This was partially arrested by removing the extremely loose tooth and touching the gum with the actual cautery. There was slight oozing after this for some time which, the mother said, appeared to subside gradually of its own accord. His younger brother, like himself, is nearly always covered with large and painful bruises. He was circumcised at the age of three months and when a little older injured the frænum of his tongue, both of these trivial wounds giving rise to annoying and somewhat obstinate bleeding.

Summing up this case I would not have it thought that I consider calcium chloride to be an unknown or untried local styptic, although, at the same time, from questions which I have put to several practitioners of undeniable experience, it appears to be far less generally appreciated in this use than as an internal remedy. But when it succeeds and perchloride of iron and adrenalin chloride fail there should be every reason for its being considered superior to, and preferred in ordinary usage to, either of these two well-known styptics—to the former on account of its intrinsic cleanliness and to the latter on account of its greater safety. Frequent applications to any part of the mouth, especially in a child, naturally render it liable for a larger dose of whatever drug may be employed to be swallowed than is perhaps justifiable; and calcium chloride if swallowed in reasonable doses is the very drug one would prescribe. It is into the hands of the great body of general practitioners that trying and anxious cases as the present one recorded first fall, and it is for such of these who may be, as I was myself, unaware of the unquestionable superiority, at least in this instance, of calcium chloride as a local styptic over other styptics of more familiar name and repute, that I take the liberty of publishing this case.

Hornsey-lane, N.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

INTRA-UTERINE FRACTURE OF THE SKULL.

BY G. W. KILNER CROSLAND, M.R.C.S. ENG., L.R.C.P. LOND.

FRACTURES occurring in newly-born children are chiefly interesting in their medico-legal aspect. The following case shows particularly well what a great amount of injury can be sustained by the child in utero without serious consequences to the mother and without premature labour taking place.

The patient was a multipara and was pregnant to term, of her fifth child. The message was urgent, and upon arrival I found that a precipitate labour had taken place and that a dead female child had been born, the mother having been delivered in a kneeling position upon the floor. She informed me that four days previously she had fallen down the cellar steps, striking and severely bruising her back (the sacral region); at the time of the accident she felt very faint and the thought passed through her mind that her child was injured; there was no escape of either liquor amnii or of blood from the vagina. Four days later labour pains commenced and rapidly progressing the labour took place as stated above.

On examining the child a very curious and unusual condition was present: she was dead, maceration and post-mortem change having commenced to take place. There was slight œdema of the feet and of the umbilical cord, the abdomen was flaccid, and the cuticle was commencing to peel away in places. On the left parietal region there seemed to be a cephalhydrocele, but on examination this turned out to be a fracture or rather separation of the left parietal and the squamous portions of the temporal bone from one another and from the rest of the skull. They were both displaced or tilted outwards and the violence which had caused this had also displaced the brain in the same direction. The lower jaw was fractured on the right of the symphysis. There was on both sides extensive orbital and subconjunctival ecchymosis. It was evident that the severe injuries which had caused the death of the child were due to the head, resting in the normal position, being forcibly jammed as it were between two opposing sides of the pelvic brim, probably the sacral promontory and the pubic bones. There were no signs of syphilis, so-called fœtal rickets, or defective ossification, which are said to be predisposing causes of this condition.

Injuries to the bones which are discovered in newly-born children may be classified under three heads: (1) those occurring before labour has commenced due to criminal or accidental violence; (2) those occurring during labour due to (*a*) disproportion between the child and the pelvis, (*b*) strong uterine contraction, and (*c*) unskilled assistance at birth; and (3) those occurring after birth, caused by (*a*) criminal violence and (*b*) accidental violence from precipitate labour, inattention, &c. Cases which come under all these headings are described by various authorities on forensic medicine who seem to agree that those in the first group and affecting the cranial bones are very uncommon. Casper, in his handbook, after mentioning two cases, says: "They compel us to assume that the child may be killed in utero by injuries to its cranium produced by violence inflicted directly upon the body of the pregnant woman"; and, further, "Death from this cause is one of the rarest phenomena." Taylor, in his

"Medical Jurisprudence," quotes several cases, including one mentioned by Stanelli, very similar to the above. Fracture of the lower jaw in utero due to external violence applied to the mother seems to be of excessively rare occurrence.

Huddersfield.

A NOTE ON THE CULTIVATION OF ANAEROBIC BACTERIA.

BY H. S. FREMLIN, M.R.C.S. ENG., L.R.C.P. LOND.

PLATE culture of bacteria under strictly anaerobic conditions by means of hydrogen is attended with considerable difficulty, as I have already shown in a paper on this subject.[1] On further experiments in anaerobic plate culture I have found that alkaline pyrogallic solution is much more satisfactory than hydrogen, if only a suitable apparatus be employed. After several attempts I have devised such apparatus. It consists of a circular glass chamber with a lid and is sufficiently large to hold an ordinary three and a half-inch Petri dish. This chamber, which is five inches in diameter and one inch in depth, has a wide rim carefully ground. The lid of the chamber is flat and is ground at the margin so that when closed the ground surfaces of the lid and of the chamber are in accurate apposition. In placing a Petri dish containing the inoculated medium within this chamber it is an advantage that the inoculated plate be put into another glass dish (as, for instance, the lid of a Petri dish) in order to prevent any splashing of the culture medium, or discolouration of the plate containing it, by the pyrogallic solution contained in the chamber. The lid of the chamber must be well smeared with vaseline so that the apparatus is efficiently sealed after the lid has been applied. The amount of pyrogallic solution required is the same as that ordinarily used for the cultivation of anaerobic bacteria in a Buchner tube. Two tests, a chemical and a bacteriological, are applicable for ascertaining that anaerobic conditions have been secured and maintained in the apparatus. As a chemical reagent methylene blue may confidently be used. When the abstraction of oxygen is complete within such chamber as that described culture media contained in it that have been coloured with methylene blue become decolourised. For the bacteriological test bacillus tetani, as a strict anaerobic organism, may be relied on. The chamber in question is quite as suitable for plates that have been kept under aerobic conditions for some days as for plates just set up; the oxygen is extracted from the medium equally well in both cases. A detailed account of this method will be found in the forthcoming report of the medical officer of the Local Government Board.

Government Lymph Laboratories, Chelsea Bridge, S.W.

A NOTE ON A CASE OF BILATERAL LOCAL HYPERIDROSIS.

BY G. NORMAN MEACHEN, M.D., B.S. LOND., M.R.C.P. LOND., M.R.C.P. EDIN.,
PHYSICIAN TO THE SKIN DEPARTMENT, TOTTENHAM HOSPITAL, N.

A BOY, aged 14 years, attended at the out-patients' department of the Tottenham Hospital with an irritative dermatitis of the skin over the abdomen due to pediculi, when it was accidentally discovered that beads of sweat were standing out upon the tip of his nose. On closer inspection the hyperidrosis was seen to be limited to the integument over the dorsum of the tip of the nose and to the two alæ nasi, corresponding to the distribution of the external terminal branches of the nasal and maxillary division of the fifth nerves of both sides. The sweating area was slightly erythematous and covered with numerous small telangiectases. The skin over the bridge of the nose, as well as that of the rest of the face, was quite dry. The condition had been noticed for a year and was practically constant, being apparently uninfluenced by emotional or meteorological changes. He had had no previous illnesses. There were no other cutaneous abnormalities present and the other systems of the body were normal.

The chief interest of this case lies in the unusual situation for a local hyperidrosis, its bilateral character, its persistence, and the absence of any apparent cause, such as neurosis or a nerve lesion.

New Cavendish-street, W.

A NOTE ON THE USE OF CARBOLIC ACID IN THE TREATMENT OF SMALL-POX.

BY JAMES T. NEECH, M.D. DURH., D.P.H. VICT.,
MEDICAL OFFICER OF HEALTH AND MEDICAL SUPERINTENDENT OF THE BOROUGH FEVER HOSPITALS, HALIFAX.

ALTHOUGH it appears that various local applications have been used in the treatment of small-pox, and among them dilute carbolic acid, I can find no record of the pure acid ever having been used for that purpose. The use of the acid when applied early in arresting the development of boils and the excellent results I have obtained in the past in the treatment of certain pustular eruptions of the skin led me to think of trying it in this disease. This idea struck me at least two years ago but I never had the opportunity of trying it till recently. The very limited experience I have had of it so far is so encouraging and in one case I think so remarkable that I determined to make a few remarks on the matter that others who have a much larger number of cases of this disease under their care may try this remedy if they think fit to do so. The method adopted was to apply carefully with a small camel-hair brush the pure acid to the rash over a certain area of the body each day, the face and head being the area selected for the first day.

The first case so treated was that of a girl, aged 12 years. It was the seventh day of the eruption—viz., Jan. 24th—and the vesicles were beginning to become pustular. The result was that the vesicles either dried up into crusts without becoming fully pustular, or, as happened in many cases, the contents of the vesicles became absorbed and the epidermis inclosing the vesicle scaled off. During this process the girl, who had been very ill, felt well and her temperature was normal. The vesicles all scaled off within five days, leaving the usual marks but no pitting.

The second case was that of a male, aged 54 years, and the disease was confluent. In this case there was a diffuse red rash all over the body and the face was swollen to such an extent that he was scarcely able to see. There was also delirium. It was impossible to apply the carbolic acid in consequence of the character of the rash until the vesicles appeared, which they did on Jan. 28th, when the application to them of the acid was commenced as before over the face and head. This treatment was assiduously persisted in till the rash over the whole body had been treated, with the result that pustulation was averted. The swelling of the face gradually subsided and the man improved daily, the temperature first falling to normal on the morning of Feb. 2nd. In this case also after treatment the serum in the vesicles either exuded and dried up into scabs or became absorbed and the epidermis peeled off.

The same treatment has been applied to two other mild cases in different stages and as far as one can judge from so limited an experience the application of carbolic acid will arrest the disease either in the papular, vesicular, or pustular stage. The second case recorded above was severe and confluent. The treatment cut short the disease, the second suppurative fever was averted, there will be no pitting, and the offensiveness of the pustular stage was prevented, and in my opinion the infectiousness of the patient was very materially diminished. In conclusion I have to acknowledge the valuable assistance which Mr. C. G. Foggo rendered me in carrying out the treatment and in watching the cases.

Halifax.

[1] See Report of Medical Officer of the Local Government Board, 1900-01, pp. 617-619.

TAUNTON AND SOMERSET HOSPITAL.—The annual meeting of the governors of this institution was held on Feb. 11th. The medical report stated that 901 in-patients were admitted during 1902, compared with 824 in 1901. The out-patients numbered 4311, against 3968 in the preceding year. The financial statement showed that the income amounted to £4771 and the expenditure to £4958, leaving an unfavourable balance of £187. The donations received during the year included £200 from Mr. Proctor Baker who was elected president for the ensuing year.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Trauma and Infection at the Epiphyseal Line.—Membranous Gastritis.—Chronic Pancreatitis with Calculi.—Stenosis of the Superior Vena Cava and of the Right Pulmonary Vein.—Primary Sarcoma of the Lung.—Traumatic Rupture of a Bronchus.

A MEETING of this society was held on Feb. 17th, Mr. R. J. GODLEE, a Vice-President, being in the chair.

Mr. H. L. BARNARD showed a series of specimens illustrating the Transition from Traumata to Infections of the Juxta-epiphyseal Line. He referred to the view chiefly supported by Ollier and other French writers that growing pains in children were the clinical expression of small hæmorrhages and trabecular fractures in those soft tissues. In conditions of latent pyæmia micro-organisms were supposed to circulate in the blood and if these escaped into the hæmatoma suppuration was liable to follow. Two specimens were shown exhibiting small hæmorrhages in the epiphyseal line of the femora of patients who had not exhibited any sign or symptom of their presence before death; one, however, had leukæmia. Mr. Barnard then endeavoured to explain the clinical varieties of infective osteitis—i.e., osteomyelitis, epiphysitis, and periostitis—by the position of the original lesion. It was claimed that central lesions caused osteomyelitis, peripheral lesions periostitis, and intermediate lesions epiphysitis.—Dr. O. F. F. GRÜNBAUM considered that there was positive evidence of the frequent existence of micrococci in the blood in many conditions, and it was difficult to understand why suppuration did not occur more often than it did.—Mr. GODLEE asked for further information with regard to the hæmorrhages occurring in the epiphyseal line and as to their frequency in the post-mortem room. He mentioned the case of a youth who fell and struck himself in several places, in each of which an abscess subsequently developed.—Dr. W. S. LAZARUS-BARLOW criticised the relation of growing pains to affections of the epiphysis. He stated that the high vascularity of the epiphyses would have led the observer to think that they would be less subject to infection than other tissues.—Mr. S. G. SHATTOCK asked whether every case of acute infective periostitis arose in the epiphyseal line. He quoted some recent work on tuberculous infection of the bones and joints, in which red marrow was regarded as the chief seat of infection.—Mr. BARNARD replied.

Dr. GRÜNBAUM showed the Cast of a Stomach vomited by a child, aged three years. The cast represented a complete lining of the stomach and consisted of a fibrinous network in which blood cells were entwined. Microscopically the only organisms found were staphylococci arranged in pairs. No bacilli were seen. This was contrasted with a cast removed from the pyloric end of the stomach of a child who had died from diphtheria in which case the pseudo-membrane was swarming with bacilli which had the form and arrangement suggestive of diphtheria bacilli. Attention was drawn to the fact that the membrane was vomited in two pieces, an interval of 18 hours separating the appearance of the first piece, which was the larger and which was from the cardiac end, from the second piece, which was obviously from the pyloric end. This, said Dr. Grünbaum, was what might be expected from the fact that the majority of oxyntic cells were at the cardiac end and a certain degree of acidity would be required to loosen the pseudo-membrane from the gastric mucosa. The temperature of the child was subnormal during the illness; the knee-jerks were absent and albuminuria was slight. After a rational rectal diet for ten days the stomach became tolerant and an uninterrupted recovery ensued.

Dr. T. CHURTON showed a Pancreas in which there was complete Atrophy of the Epithelial Elements. The duct was lined with small calculi. The patient was a man, aged 41 years, who had begun to lose flesh and strength three years before. Sugar was found in the urine when first examined one year before. The wasting of muscles was extreme, but he was active until a few days before his death and perfectly conscious to the last hour. There was never acetonuria. The quantity of urine was not great—from 80 to 100 ounces daily; the specific gravity was from 1023 to 1035. The quantity of sugar was from 1000 to 3000 grains and that of urea was from 300 to 550 grains. There was no redness of the face or tongue; the sugar discharge was not lessened by codeia. The patient had been a furnace-man in an iron foundry and habitually drank cold water, even in winter, when heated at work. He showed some signs of premature senility, thick radial arteries and inelastic costal cartilages, with deficient lateral expansion of the chest.—Dr. JOHN F. H. BROADBENT mentioned three cases of atrophy of the pancreas which he had recently seen. Two of these were in alcoholic subjects who had cirrhosis of the liver; the third was in a young individual with rapid wasting and glycosuria.—Dr. CHURTON, in reply, quoted Lancereaux's statement that every case of diabetes in a lean person was pancreatic in origin. He doubted this statement as some of the nervous cases of diabetes also showed marked wasting.

Mr. T. W. P. LAWRENCE and Dr. H. BATTY SHAW showed a specimen of Stenosis of the Superior Vena Cava below its junction with the Vena Azygos Major and also of the Right Pulmonary Vein. The specimen was found in a patient, aged 36 years. Five years before death he began to suffer from palpitation, dizziness, faintness, dyspnœa, and hæmoptysis; he was sick after each meal and was thought to be suffering from phthisis. After about three months' treatment he improved so much that he was able to resume his duties. A second attack occurred 18 months after the first one and the same symptoms supervened; in addition the face had become very swollen and large veins had developed in the front of the chest and abdomen. A right-sided serous pleural effusion was found which recurred after aspiration. No further aspiration was performed and he was sent to convalesce in the country. He improved somewhat and later was treated with potassium iodide, presumably because he had contracted syphilis 15 years before the onset of his first attack. He was, however, unable to return to work for the next 18 months, but in the summer of last year he was able to resume light duty in the City. At this period he could not lace his boots owing to the dyspnœa produced by stooping, he was often sick after meals, and he rested at night propped up against pillows. In December, 1902, he was suddenly seized with great pain in his chest and was admitted to University College Hospital under the care of Dr. J. R. Bradford. Whilst in the hospital he grew steadily worse and he died on Dec. 30th; the œdema, which had been confined to the upper part of the body, spread to the abdomen and legs, there was a return of right pleural effusion, and the veins in the front of the body were very much dilated and filled from above downwards. At the necropsy the portion of the superior vena cava reaching from its junction with the vena azygos major to the auricle was found to be converted into a thick cord through which a small probe could be passed with difficulty, showing that the lumen was not quite obliterated. The entrance of the superior vena cava into the auricle was marked by dense white scar tissue. The single right pulmonary vein showed an annular stenosis where it was involved in an indurated mass, which also caused considerable thickening of the anterior wall of the left auricle, the anterior and upper part of the septum auricularum, and the inner wall of the right auricle. This mass of indurated tissue was continuous with that already noticed at the lower end of the superior vena cava. There were pericardial adhesions at the base of the heart and the right orifice of the transverse sinus of the pericardium was closed by adhesions. There was a further occlusion of the sinus transversalis towards its left end so that a closed cavity was formed of the right portion of the sinus. Its wall was thick and composed of dense fibrous tissue; its inner surface was of a dull red colour and was coated with a loosely adherent inflammatory exudation of a purely fibrinous character. The rest of the heart was normal. Both lungs were free from any sign of tuberculous disease and the mass of indurated structures above mentioned was continuous with the thickened pleura overlying the right lung and attaching the organ to the pericardium and chest wall and forming in the latter case an interpleural cavity from which a thin turbid fluid was removed. On section the right lung showed consolidation and collapse, the left lung being normal. The areolar tissue of the mediastinum was normal except where it was in relation with the pulmonary adhesions and the induration around the great veins above described; in these situations it was thickened, but there was no general chronic indurative mediastinitis. The case should apparently be classified as one of indurative mediastinopericarditis, but it presented the peculiarity of being one in

which the change was markedly localised, and in view of the previous history of syphilis the possibility presented itself of the disease having originated in a gumma around the great veins of the heart.—Dr. A. E. GARROD stated that most of the recorded cases of indurative mediastinitis were associated with right-sided pleurisy. He referred to a case recorded by Sir Dyce Duckworth and himself of total occlusion of the superior vena cava, an interesting feature of which was that there was no swelling of the head or neck. He also referred to another case of narrowing of the superior vena cava with swelling of the head and neck.

Dr. E. P. BAUMANN and Dr. F. A. BAINBRIDGE showed a specimen of Primary Sarcoma of the Lung from a girl, aged three years and 11 months, who was admitted into the Hospital for Sick Children, Great Ormond-street, under the care of Dr. D. B. Lees on June 30th, 1902, as a case of empyema. The illness had begun six weeks before with headache and abdominal pain and during its course the child had become greatly emaciated; a cough developed and several attacks of hæmoptysis occurred. The past history and family history were unimportant. On admission the case appeared to be a clear one of effusion into the left pleura, with dulness over the whole left side of the chest and absence or deficiency of the breath and voice sounds, bulging of the intercostal spaces, and displacement of the heart to the right. The temperature was 101·4° F., the pulse was 132, and the respirations were 68. Repeated aspirations and an exploratory incision resulted only in the withdrawal of a little blood-stained fluid containing on one occasion fragments of cheesy débris; these gave negative results on examination for malignant disease, tubercle, and other organisms. The temperature remained high and irregular. The child became rapidly worse and death occurred on July 12th, a fortnight after admission. The whole duration of the illness was eight weeks. At the necropsy the upper lobe of the left lung was found replaced by a soft growth which microscopic examination showed to be a sarcoma. The lower lobe was collapsed and firm, but showed no traces of the new growth. The left pleura was adherent and thickened but was not invaded by the growth. The bronchial and mesenteric glands presented a healthy appearance and no other tissues or organs were involved. The post-mortem records of the Hospital for Sick Children from January, 1860, to the present day did not furnish a single other instance of the occurrence of primary sarcoma of the lungs.

Mr. GODLEE showed a card specimen of Traumatic Rupture of a Bronchus without Fracture of the Ribs or other Intrathoracic Injury.

CLINICAL SOCIETY OF LONDON.

The Drainage of the Knee-joint in Acute Suppurative Arthritis.—A Case of "Local Panatrophy."

A MEETING of this society was held on Feb. 13th, Dr. G. VIVIAN POORE, a Vice-President, being in the chair.

Mr. H. L. BARNARD communicated a paper on the Drainage of the Knee-joint in Acute Suppurative Arthritis, illustrated by nine cases. He commenced by considering various operative procedures which had been adopted from time to time such as those of the late Mr. Walter Rivington and Mr. Walter Whitehead. Mr. Barnard pointed out that few cavities of the body were so difficult to drain as the knee-joint. The usual method by lateral anterior incisions drained only the anterior half of the joint. The anatomy of the knee-joint showed two capacious pouches behind which reached above the condyles posteriorly, where they were covered by the heads of the gastrocnemius. They were separated from one another by a complete septum formed by the crucial and other ligaments. The external pouch sent a bursal extension down the leg along the tendon of the popliteus. When the knee-joint was extended these two pouches were shut off from the front of the joint by the tight coaptation of the femur and tibia. When distended with pus they ruptured into the depths of the popliteal space, where the sepsis was liable to involve the vein. The abscess then tracked down the calf and up the thigh, making drainage of both tracks almost impossible. The pouches should be freely opened by two-inch incisions in the line of the leg made by cutting on the condyles where they could be felt projecting on either side of the popliteal space when the leg was fully extended. In order not to wound nerves, when the skin had been divided a blunt instrument should be used to scrape down to the capsule, which might then be freely divided with the knife. The knee was then flexed to relax the structures and tubes were inserted on each side. In eight of the nine cases treated by this method the temperature fell to normal in from 36 hours to a week. Massage—downward in front and upward behind—greatly assisted the evacuation of pus from the deep pockets. The nine cases given in the paper were consecutive. The four traumatic cases gave the best results. Two had good movement, one had some movement, and one had fibrous ankylosis. The five cases of auto-infection were less satisfactory; two were amputated, one for feeble repair and persistent sinuses, in an old woman, aged 65 years, and the other for a tuberculous cavity in the end of the femur infected with erysipelas. Two cases apparently due to leucorrhœa were most unsatisfactory. It was claimed that the method of posterior drainage would cope successfully with the immediate dangers of sepsis. The final condition of the joint depended rather on the cause of the suppuration. Subacute cases of suppurative arthritis of the knee due to auto-infection should be treated by the usual lateral patellar incisions and irrigation.—Mr. W. G. SPENCER observed with regard to the posterior pouches of the joint that if they were opened from behind there was much more danger of injuring the popliteal nerves than if opened by cutting down upon a probe or sinus forceps. Discussing the merits of the open method he related a case on the verge of delirium tremens in which an injury to the knee-joint was followed by necrosis of the patella and suppuration. In this case he opened the joint freely and recovery ultimately followed with the joint ankylosed in the middle position. He regarded the open method as a preferable alternative in cases that would otherwise have to be treated by amputation.—Mr. H. H. CLUTTON advocated small lateral incisions and washing out the joint, followed by immediate suture, a method which had given excellent results in a number of cases usually treated by more energetic measures. The joint could be digitally examined. The infecting microbe could be investigated. He thought that some of Mr. Barnard's cases, although acute, might have been treated in this way. Acute cases had been very satisfactorily treated by this method.—Mr. A. MARMADUKE SHEILD remarked that the pouches of the knee-joint were very inconstant in their position and communications. He also claimed that the good results related by Mr. Barnard were not confined to the London Hospital but that elsewhere acute suppurative arthritis was generally recovered from with movement of the joint, especially in young and otherwise favourable cases. Age was an important factor. He referred to five cases of his own of acute gonorrhœal infection of the knee-joint treated by one incision on the inner side of the patella and flushing with a solution of biniodide of mercury, the wound being closed at once, with very good results. In four complete, and in the fifth almost complete, movement was obtained. He recalled the striking results obtained by Dr. J. O'Conor of Buenos Ayres with this method of treatment. This surgeon, indeed, went a step further, for he treated in the same way joints with what was generally described as rheumatic effusion but which in many instances were obviously nothing of the kind, being of the nature of a pyæmic infection such as occurred in puerperal women and after neglected abortion. Similar septic suppuration was met with in servants who lived in badly drained houses. Mr. Sheild thought that in some cases drainage might be done advantageously through posterior incisions, but advocated the employment of large tubes with thorough irrigation of biniodide of mercury solution (1 in 1000).—Mr. F. C. WALLIS referred to three cases of gonorrhœal effusion into the joint which he had opened and washed out with normal saline solution with extremely satisfactory results, in that the patients recovered with perfectly moveable joints. He did not think that it was good practice to wash out the joint with strong antiseptic solutions, which tended to irritate further the synovial membrane.—Mr. BARNARD, in reply, pointed out that he only advocated the posterior incisions in very severe cases, especially in cases of suppurating wounds of the knee or wired patella cases which went wrong. He asked Mr. Sheild whether there was pus in all his cases, in view of the fact that the great majority of these cases got well without any incision at all. He asked Mr. Spencer whether he or anyone had ever succeeded in introducing a probe or sinus forceps into the posterior pouches from the front, a feat which he himself had never

been able to accomplish even in the post-mortem room.—Mr. SPENCER replied that he was, of course, contemplating cases in which the ligaments of the joints were more or less disorganised and relaxed and he agreed that it would hardly be practicable in a normal joint.—Mr SHEILD added that in all his cases the joint was distended with turbid serum containing large flakes and lumps of purulent lymph rich in gonococci.

Dr. A. STANLEY BARNES (introduced by Sir WILLIAM GOWERS) read the notes of a case of "Local Panatrophy" which he (Dr. Barnes) believed in its clinical relationships lay midway between the case shown by Dr. Harry Campbell on Oct. 24th, 1902,[1] and that exhibited by Dr. T. D. Savill on Jan. 23rd, 1903,[2] at that society. The patient at the age of 24 years was thrown from a horse and at 25 years fell on the back of her head whilst skating. At the age of 32 years she first began to have facial neuralgia, and at 34 years she noticed a difficulty in raising the left arm. She was seen about that time (1884) by Sir W. Gowers who found atrophy around the shoulder and in numerous other places on the surface of the body. At the present time, the patient now being 52 years of age, patches of atrophic skin were to be found on the face and in many other situations. There was also a partial right facial palsy, possibly due to implication of the facial nerve in one of the atrophic patches. Over the largest of the patches the subcutaneous tissue and the muscle were wasted, and in one patch the subjacent bone was also atrophied. The skin was soft, thin, and devoid of hairs, there was no anæsthesia, and there was no reaction of degeneration in the muscle beneath.—Dr. T. D. SAVILL remarked on the interest of the case which, like the cases exhibited by Dr. Harry Campbell and by himself, he regarded as belonging to the class of morphœa atrophica described by the late Sir Erasmus Wilson. The atrophy might be very considerable and involve the subjacent tissues. He (Dr. Savill) had lately seen a patient in whom the patches, at first resembling morphœa lardacea (sclerodermia), had after eight years become atrophic like those under consideration. The history of injury and neuralgia in Dr. Barnes's case tended to confirm the idea that the disease was of neurotrophic origin.—Dr. POORE alluded to a patient under his care who presented patches of atrophic skin on different parts of the body, evidently of the same nature as those described and who also exhibited curious recurrent patches of local dilatation of the blood-vessels on the fingers.—Dr. BARNES, in reply, stated that no evidence of vascular disturbance had been discovered in this case. The neuralgia from which the patient suffered was bilateral. He adhered to his statement that the patient was suffering from paralysis of the face and gave his reasons for that belief. There was a total absence of any sclerosing tendency in the skin lesions.

OBSTETRICAL SOCIETY OF LONDON.

Fœtal Ascites.—Profuse Meningeal Hæmorrhage during Labour.—Primary Carcinoma of the Fallopian Tube.—Sarcoma of the Ovary.—Exhibition of Specimens.—Reports of Officers.—Presidential Address.

THE annual meeting of this society was held on Feb. 4th, Dr. PETER HORROCKS, the President, being in the chair.

Dr. T. W. EDEN showed a specimen of Fœtal Ascites. The patient, aged 18 years, was admitted to one of the workhouse infirmaries in London on Jan. 17th, 1903, having then been for some hours in labour. On admission it was noted that the external os was of about the size of half-a-crown, the membranes were ruptured, and the presentation was a footling. Pregnancy had advanced to about the end of the eighth month. The progress of the labour was very slow, and on the morning of the 18th one drachm of liquid extract of ergot with one ounce of brandy was given and repeated twice during the course of the day. At 8 P.M. the foot of the child was found in the vagina, in the words of the medical attendant, "quite black and putrid." Traction upon the limb was made to deliver the breech, but the foot separated at the ankle. The remainder of the limb was then seized, but it soon separated at the hip-joint. Traction upon the other leg failed in the same way. Then an attempt to seize the breech was made with a pair of craniotomy forceps, but "every time traction was made they came away with a piece of putrid skin." Being unable to make out the cause of obstruction, the medical attendant sent for assistance. A distended abdomen was found to form the presenting part and to be the cause of the obstruction to delivery. It was opened with a pair of scissors, and between two and three quarts of thin yellowish fluid escaped. The body of the child was delivered naturally within a few minutes. The placenta was adherent and had to be removed by the fingers. The body of the fœtus showed marked signs of maceration. On laying the abdomen open the peritoneal cavity was seen to be enormously enlarged; the liver, the stomach, and the intestines were crowded into the vault of the diaphragm; there were neither peritoneal adhesions nor any signs of peritonitis in any part. The heart was normal, there was no distension of the ureters, and the kidneys were normal. The liver and portal circulation appeared to be normal. There was no syphilitic history. The cause of the ascites was obscure. The mother made a good recovery.—Dr. HERBERT R. SPENCER had met with about six cases of fœtal ascites. In some of these the amount of fluid was small but there was a large amount of lymph binding the intestines together and the absence of any obvious cause for this peritonitis and the presence of bone disease and the history had led him to think that in these cases the ascites was due to syphilis.—Dr. E. MALINS was inclined to think that syphilis was adduced generally in the absence of other known or ascertained causes.

Dr. A. W. SIKES brought forward a short communication on a case of Profuse Meningeal Hæmorrhage during Labour and this was discussed by Dr. SPENCER and the PRESIDENT.

Dr. H. RUSSELL ANDREWS read the notes of a case of Primary Carcinoma of the Fallopian Tube, and some interesting points in regard to the disease were brought forward by Mr. ALBAN H. G. DORAN and Dr. J. INGLIS PARSONS.

Dr. PARSONS read the notes of an unusual case of Sarcoma of the Ovary.

Mr. HANDLEY showed a specimen of a Solitary Interstitial Fibroid removed by abdominal myomectomy.

Dr. SPENCER exhibited Kurz's ingenious Needle Holder.

The reports of the treasurer, of the librarian, and of the chairman of the Board for the Examination of Midwives were then received and ordered to be printed in the Transactions of the society, the different officers being thanked for their services.

The PRESIDENT, in delivering his address, referred to the passing of a law whereby legally qualified ladies were made eligible for the Fellowship of the society and the names of ten ladies who had been elected during the past year were given. It was also pointed out that a new rule had been made to enable authors of papers to have their work published in journals other than in the Transactions of the society if they so desired. The financial condition of the society was satisfactory. Now that the Midwives Act had been passed the necessity for continuing the examination held for midwives by this society would shortly cease to exist. Dr. F. H. Champneys was congratulated on being elected chairman of the first board appointed by the State and the State was to be congratulated on having secured the services of one who knew the work so well and who was second to none in ability for organising the new State examinations on a thoroughly satisfactory basis. The new pathological committee, instituted 12 months ago, had done excellent work. Allusion was made to the excellent material provided by the exhibition of 59 specimens during the past year. Nine papers had also been read during the year, and a brief *résumé* of each paper was given, the salient points of each subject being commented upon, together with the general opinions which were given during the discussions. Obituary notices of Fellows who had died during the preceding year were given—namely, of Mr. John Griffith Lock of Tenby; of Mr. John James Tweed of London; of Dr. Thomas Robert Lombe of Torquay, who was elected a Fellow in the year of the foundation of the society, 1859; of Mr. James Neal of Birmingham; and of Dr. Henry Oldham, consulting obstetric physician to Guy's Hospital. Dr. Oldham was one of the first vice-presidents of the society and was its third President and its second treasurer and one of its first three trustees. He held the latter post up to his death, that is, for a period of over 40 years. Dr. Champneys had been appointed in his stead. Dr. Oldham was appointed obstetric physician to Guy's Hospital at the same time as was Dr. Lever. He was one of the best lecturers that Guy's Hospital ever had. Interesting details of his life were given, obtained from Sir Samuel Wilks, Dr. Constantine Holman, Colonel

[1] THE LANCET, Nov. 1st, 1902, p. 1196.
[2] THE LANCET, Jan. 31st, 1903, p. 303.

Oldham (his surviving son), and others. Thanks were given to the senior honorary secretaries, Dr. Spencer and Dr. Amand J. M. Routh, who had greatly assisted the President during his first and second years of office respectively.

A vote of thanks to the President was moved by Mrs. M. A. D. SCHARLIEB and seconded by Mr. DORAN and carried unanimously.

The list of officers for 1903 recommended by the council was read.

A vote of thanks to the retiring vice-president and members of the council was moved by Dr. C. HUBERT ROBERTS and seconded by Dr. F. G. BLACKER.

Dr. C. J. CULLINGWORTH moved, and Dr. EDEN seconded, that the cordial thanks of the meeting be given to Mr. Doran for his valuable services to the society as editor of the Transactions, which office he had now resigned.

This was carried with acclamation and was acknowledged by Mr. DORAN.

OTOLOGICAL SOCIETY OF THE UNITED KINGDOM.

Tuberculosis of the Ear, the Nose, and the Naso-pharynx.

A MEETING of this society was held on Feb. 2nd, Dr. URBAN PRITCHARD, the President, being in the chair. A discussion on Tuberculosis of the Ear, the Nose, and the Naso-pharynx was opened with papers by Dr. V. H. WYATT WINGRAVE, Dr. W. JOBSON HORNE, and Dr. W. MILLIGAN.

Dr. WYATT WINGRAVE read a report upon the Microscopical Examination of the Discharge in 100 cases of Middle-ear Suppuration, with an Analysis of the Results, having special reference to the presence of tubercle and "acid-fast" bacilli. He arrived at the following conclusions: (1) that acid- and alcohol-fast bacilli were demonstrable in a large proportion of chronic purulent ear discharges; (2) that in 17 cases they were presumably tubercle bacilli, in so far that they conformed to the recognised morphological and staining characters, and were for the most part associated with trustworthy clinical evidence of tuberculosis; (3) that in seven (pseudo-tubercle bacilli) cases, while conforming in a greater or less degree to the staining requirements, they were morphologically unlike tubercle bacilli, yet five of them had either a family or personal history of phthisis; (4) that success in their demonstration in a great measure depended upon the methods of collecting and staining, together with perseverance in search; and (5) that in the peculiar selective action of the squames—a property specially attributed to certain bacilli—they had a possible source of error in diagnosis and an explanation of the peculiar affinity of other bacilli for fuchsin.

Dr. JOBSON HORNE read a paper on the Clinical Diagnosis and Surgical Treatment of Tuberculosis of the Temporal Bone considered with reference to the Pathology and Morbid Anatomy of the Disease. The paper, so far as it related to the clinical diagnosis, after taking into account the characteristic features of tuberculosis of the ear dealt mainly with two points: (1) the value to be attached to circumstantial evidence in the absence of positive proof of the nature of the disease; and (2) the necessity for discriminating between primary and secondary infection of the ear. The surgical measures and the limitations to be put upon such measures were to be decided by ascertaining this second point. Caution was expressed against regarding suppurative disease of the middle ear occurring in a tuberculous subject as necessarily tuberculous in nature. It was held that the detection of the bacillus tuberculosis was the only proof positive of the disease being tuberculosis. The existence of a group of "acid-fast" bacilli other than the bacillus tuberculosis did not invalidate the microscopic diagnosis of the disease, provided the ordinary requirements of bacterioscopic technique were complied with. Negative evidence was of no value; failure to detect the bacillus tuberculosis did not prove the disease to be non-tuberculous nor did it disprove the possibility of it being tuberculous. The difficulty in detecting the bacillus in the discharge was discussed. A theory was advanced which would at once explain both this difficulty and a well-known clinical feature of the disease—absence of pain and also the correlation of these two clinical phenomena. The theory was based upon the fact demonstrated by Dr. W. Bulloch and Dr. J. J. R. Macleod that the "acid-fast" property was due to a wax-like body in the bacillus and not to a fat; that the wax when broken up set free an alcohol which was an essential factor in the staining property. It was suggested that the decomposition of the wax was accountable for the difficulty in detecting the bacilli and the resulting product possessed an anæsthetic property. The differential diagnosis between primary and secondary infection could be made partly by the exclusion of tuberculosis existing in other organs, but more particularly by the condition of the glands adjacent to the affected ear; in the primary infection the glands were more often and more extensively involved. As regards treatment, the surgical ablation of disease secondary to pulmonary disease was to be avoided, but in the primary form it was to be undertaken by removing in the first instance the infected glands; the possibility of the occurrence of a blood infection and of death from miliary tuberculosis was to be kept in view.

Dr. MILLIGAN read a paper on the Diagnosis and Treatment of Tuberculous Disease of the Middle Ear and its Accessory Cavities. The paper dealt fully with the subject and the conclusions arrived at were as follows: 1. That in all cases of middle-ear disease of suspected tuberculous origin search should be made for tubercle bacilli either in the discharge, in tufts of exuberant granulation tissue, or in enlarged periotic glands. 2. That inoculation experiments (either subcutaneous or intra-peritoneal) afforded a ready and trustworthy means of proving or excluding the tuberculous nature of the disease. 3. That a final and exact diagnosis was imperative both from the point of view of prognosis and of treatment. 4. That tuberculous disease of the middle ear and accessory cavities was a frequent disease amongst infants and young children. 5. That the disease was most frequently found as secondary to tuberculous processes in other regions of the body. 6. That primary tuberculous disease of the middle ear was probably of more frequent occurrence than was usually supposed. 7. That the prognosis was always grave, but that in a certain proportion of cases suitably planned surgical intervention would eradicate the disease. 8. That in many cases it was advisable to conduct the operative treatment "in stages." 9. That when less than 10 per cent. of hearing power remained no attempt should be made to preserve the organ as an organ of special sense. 10. That when more than 10 per cent. of hearing power remained in a patient, in otherwise apparent health, a definite attempt should be made to preserve what amount of hearing power still existed. 11. That where the tuberculous origin of the disease had been scientifically demonstrated the case should be regarded as infectious and precautions taken accordingly.

A discussion, in which the PRESIDENT, Mr. C. A. BALLANCE, Mr. A. E. CUMBERBATCH, Dr. A. L. WHITEHEAD, Dr. HUGH E. JONES, and Mr. A. H. CHEATLE took part, was adjourned until March 2nd.

SOCIETY OF ANÆSTHETISTS.—A meeting of this society was held on Feb. 6th, Mr. Walter Tyrrell, the President, being in the chair.—The President, referring to the case of death following an administration of nitrous oxide gas, a newspaper report of which he read at the last meeting of the society, said that on investigation he had found it to be a death not from nitrous oxide gas but from acute ammonia poisoning, strong ammonia having been held to the nostrils of the patient for about ten minutes after the administration by the dentist who had given the gas, as the patient did not seem to be recovering in the usual way. The patient was removed to hospital and died some 13 hours after the administration.—Dr. Joseph Blumfeld read a paper entitled "The Relation of Anæsthetics to Shock" and said that his object was to raise a discussion upon the question of the part which anæsthetics played in the prevention of shock; he was aware that exactly opposite opinions were held on this point, some observers believing that the shock which was present after certain operations was due entirely to the anæsthetic and others believing that it was due entirely to the operative procedures and would be much worse without the anæsthetic. He also referred to the difference of opinion with regard to shock and the depth of anæsthesia, some anæsthetists holding that shock was more commonly met with in light than in deep anæsthesia and others holding exactly contrary views. In speaking of shock he also included collapse, for both were conditions of prostration in which failure of the circulation played a prominent part. Death from shock

of the operation was much less frequent now than it was in the old days, partly because anæsthetics abolished pain which was an important factor in the causation of shock, and partly because they protected the central nervous system from receiving impressions of the serious damage which was being done to the tissues by the operation. Shock was a reflex phenomenon, but the relation of anæsthetics to shock differed from their relation to the other reflexes in that whereas they could only abolish the latter they could both abolish and also produce shock or a condition exactly resembling it. Dr. Blumfeld was of opinion that since both shock and deep chloroformisation were characterised by a marked fall in blood pressure a deep degree of anæsthesia should as far as possible be avoided in operations upon patients already suffering from shock or likely to suffer from it as a result of the operation. There was, however, no evidence to show that ether produced shock in the same way as chloroform, although it often gave rise to collapse after a prolonged administration of large doses in the kind of case referred to. The surgeon was apt to forget the immense importance of economising the time during which parts of the body, such as the bowels, for instance, were being subjected to manipulation, for the longer such procedures lasted the more easily was shock induced. The purely nervous element had also to be taken into consideration and added greatly to the difficulty of determining the cause of shock. Dr. Blumfeld here quoted undoubted cases of shock from nervous influence. In a letter on the Surgical Treatment of Perforated Typhoid Ulcer, published in THE LANCET of Jan. 17th, p. 199, Mr. H. J. Curtis had raised the question of anæsthetics and had advocated the use of local anæsthesia, assuming an extra danger from general anæsthesia in these cases. Dr. Blumfeld believed that the society was not prepared to admit this assumption but that it was in a position to say with regard to such cases that if an operation must be performed there was less danger in performing it if a general anæsthetic were properly given than there was in performing it without one.—Mr. Curtis said that if the perforation were doubtful and an exploratory operation were undertaken he preferred local analgesia, but if the perforation were undoubted then a general anæsthetic was much to be preferred, and he merely suggested local anæsthesia as a compromise in those cases where it was thought that a patient ought to have the benefit of the doubt of an exploratory operation, but where the intrinsic risk of a general anæsthetic had to be avoided. He had seen Cæsarean section performed under local anæsthesia with no pain or trouble except when the vessels were caught in the clip forceps.—Mrs. F. M. Dickinson Berry, M.D., and Miss L. B. Aldrich-Blake, M.D., said that they had seen many operations for goitre performed under local anæsthesia without any symptom of shock.—Mr. H. C. Crouch was emphatically of opinion that shock was far more likely to supervene under light than under deep anæsthesia, that his practice was to push the anæsthetic to its fullest extent, and that he taught that fall of blood pressure from chloroform was much less dangerous than fall of blood pressure from shock.—Dr. Harold Low said he constantly observed that when the fear of the operation, which caused symptoms of shock, was removed by the administration of an anæsthetic the patient's condition markedly improved and the symptoms of shock disappeared; this was especially the case under ether.—The President said that after an experience of 25 years he felt that there were cases in which shock was produced under light anæsthesia and also cases in which the shock was more marked under profound anæsthesia. Each case had to be treated according to circumstances.—Dr. James Maughan reported a case of Death following the Administration of Nitrous Oxide. The patient was a young woman who was suffering from tonsillitis but in whom the constitutional symptoms were marked and the pulse-rate was out of all proportion to the physical signs. Dr Maughan administered nitrous oxide as she would not allow him to incise the tonsil without an anæsthetic. She was placed in an easy chair in her nightdress with a prop between the teeth. Anæsthesia was quietly induced to the stage of loss of light reflex, two breaths of air having been given with the gas. At this point the face-piece was removed but precisely at this moment the patient was observed to have stopped breathing. She was immediately placed on the floor with the forceps upon the tongue, Howard's method of artificial respiration was tried for about 15 seconds, ammonia being held to the nose meanwhile, but no air entered; no further time was therefore lost, Dr. Maughan promptly performing laryngo-tracheotomy, when a full deep inspiration was taken, the lips and cheeks quickly returning to their normal colour. The corneal and conjunctival reflexes were, however, absent and never returned. The radial pulse was small, quick, and barely perceptible; the respirations were about 12 per minute and so continued for 15 minutes when the intervals began to enlarge and the inspirations to become shallow. The breathing became more and more irregular during the next ten minutes when the patient died, the pulse during the last ten minutes of life becoming imperceptible at the wrist, although the heart sounds could be heard up to the last moment. The post-mortem examination revealed nothing beyond extensive angina Ludovici and some œdema of the glottis. The mitral orifice of the heart was rather smaller than normal but there was no evidence of structural damage either recent or remote. Dr. Maughan was at a loss to explain the cause of death since the tracheotomy prolonged life for 19 minutes; he therefore asked for the opinion of the society. He regretted that he had not used a local or a very light chloroform anæsthesia, but he thought that in a rapidly progressive disease of this kind affecting the respiratory organs no anæsthetic could be deemed harmless.—Dr. R. J. Probyn-Williams agreed that in such circumstances nitrous oxide gas was certainly not harmless, but in this case he could not see that the death was due to the gas since the patient lived for 19 minutes after the administration was stopped and the air way was rendered clear by the operation of tracheotomy.—Dr. Low related a similar case in which he had been called upon to give chloroform; he was using the lightest possible degree of anæsthesia but the patient became so ill that he stopped the administration and the patient recovered sufficiently to be able to answer questions, only to die a few moments later. He pointed out that if this patient had not spoken the death would have been attributed to the chloroform.—The President agreed that the case could not be attributed solely to the anæsthetic, and there was no doubt that the patients in these acute cases of septic throat died very suddenly. He could not see what more Dr. Maughan could have done for the patient. He thought that probably the true explanation was that the patient died from heart failure due primarily to the septic infection but hastened by the anæsthetic.

MANCHESTER MEDICAL SOCIETY.—A meeting of this society was held on Feb. 4th.—Dr. A. M. Edge delivered his Presidential Address on Diagnosis and Some of its Difficulties. After some preliminary observations the President commented on the necessity, when examining a case, of using the knowledge which might be gained by careful observation of the patient's expression, attitude, &c. He deprecated having recourse to bacteriological methods of diagnosis until a thorough examination of the patient had been made and an opinion had been formed thereon. An exception was made, however, in the case of suspicious sore-throats, in which he advised an examination for Löffler's bacillus at the earliest possible moment. He went on to say that the term "diagnosis" when used in its widest sense included etiology, prognosis, and treatment and he gave illustrations in support of the statement. Some of the causes of failure in diagnosis were then enumerated, such as absence of previous history, haste, carelessness, and attaching too much importance to a single symptom. Incomplete diagnoses were also referred to and several cases were mentioned as instances. But after excluding all such causes of difficulty and failure the President stated that there would always remain a large number of cases in which diagnosis was frequently impossible from their very nature, giving as an example the group of affections termed, from an important symptom, obstruction of the bowels. The President concluded by a reference to the wonderful advance in diagnostic methods which had occurred during the last quarter of the nineteenth century.—Dr. P. H. Mules communicated a paper on Some Toxins in their Relation to the Eye and its Appendages. The following cases were described. 1. A case of Retro-bulbar Neuritis with complete blindness of the right eye of a young woman, aged 28 years, who 19 years previously had suddenly and persistently lost her hearing on the same side. The toxins of inherited syphilis were considered to be the cause. Mercurial inunction and full doses of quinine were followed by return of the vision to J. 1 and $\frac{6}{9}$, but there was persistent disc pallor. The hearing returned to one-fourth of

the normal. The diagnosis was confirmed by the family history. 2 Three cases of Paralysis of the Ocular Muscles following Herpes Zoster Frontalis. The constant pathological condition of the sensory ganglia in cases of zoster was almost conclusive of a bacterial infection. Therefore these paralyses were considered to be due to resulting toxins. The absence of the herpetic eruption in two was interesting as allowing many obscure cases of neuritis with paresis to be referred to zoster for their origin.—Dr. Thomas Harris related a case of Unconsciousness which presented difficulties in diagnosis. He first saw the patient, a man, aged 50 years, on Dec. 4th, 1902, at 6 P.M., in consultation with Dr. A. V. Davies of Shaw. The patient was then sitting in a chair quite unconscious and could not be roused, although pricking caused some resentment. His colour was natural, as also were the respirations, and his pulse-rate was 80 per minute. When the eyelids were raised both pupils were at first minutely contracted, but about a quarter of an hour later when re-examined they were of normal size and slowly responded to light. The heart and blood-vessels appeared to be healthy and the urine was normal. There was no paralysis of the ocular or facial muscles. The limbs when lifted and allowed to drop fell in a flail-like manner. Five hours later Dr. Davies was astonished to find the patient sitting up and in ordinary conversation with some friends. He said that he felt a little drowsy and as though he had lost count of things. Dr. Davies stayed with him until 3 A.M., during which time he persisted in talking and smoking. At 3 A.M. he was persuaded to lie down and he went to sleep. At 6 A.M. he was roused and given some nourishment. His bowels were moved at this time but there was nothing peculiar in the motion. At 10 A.M. he was in much the same condition as on the previous evening, but more easily roused. At 12.30 P.M. he was again talking and smoking. He then had another motion which was very green and offensive. From that time until Dec. 7th he slept for a few hours at a time and then woke up for a few hours but since Dec. 7th up to the present time he had enjoyed his usual health. When he had recovered he gave the following account of his illness. On Dec. 3rd he was in his usual health and at 6 P.M. he had tea. At this meal he partook of a dish of cockles which were cooked by boiling. No one else in the house partook of any cockles. At 8.30 P.M. he did not feel very well. He was, however, able to attend a meeting and returned home and went to bed at 11.30 P.M. in apparently good health. At 5.30 A.M. on Dec. 4th he got up to go to his work. On getting out of bed he felt all right but then had a shooting pain in the right eye, followed by loss of sight of that eye. He proceeded to dress himself in a dazed sort of way and then called his son as he was accustomed to do. He said that his legs at this time felt a bit queer, as though they did not belong to him. He walked downstairs. The sight had now returned to the right eye and he lighted the kitchen gas. Immediately after that he felt "as though he was running his head into a corner." He walked towards his armchair and then became unconscious. At 7.10 A.M. his wife came downstairs, found she could not rouse him, and sent for the medical attendant. Dr. Davies, thinking the patient might have taken some narcotic drug, as he had been subject to asthma, tried to rouse him and with assistance walked him about. By this means in the course of a few hours he was roused sufficiently to be able to walk about alone. He talked in a somewhat incoherent manner and like a man who was drunk. There was, however, difficulty in keeping him awake and about 3 P.M. he relapsed into complete stupor and remained so until Dr. Harris saw him at 6 P.M. It appears that the patient had been subject to asthma for the last 18 years but had otherwise enjoyed good health. He had never had any kind of fits and had not been subject to dizziness or headaches just previously to, or some time before, the attack. The patient was a very intelligent man and not at all a neurotic subject. His field of vision when tested after the attack was normal and the attacks of asthma appeared to have been true bronchial ones and not attacks of hysterical dyspnœa. Considering the long period—nearly 12 hours—between taking the cockles and the onset of the attack, together with the recurring attacks of stupor, whilst in the intervals he was quite awake and with a clear intellect, it did not seem probable that the shell-fish were the cause. That it was some form of auto-intoxication arising from absorption of some toxic substance from the bowels was worthy of some consideration, but the attack appeared more probably to have been a manifestation of the *petit mal* of epilepsy. The sudden onset with pain in one eye and loss of sight were very suggestive of that being the real nature of the attack. Nevertheless, the absence of any previous attack which could suggest epilepsy in any form rendered the case unusual and worthy of record.

BRITISH GYNÆCOLOGICAL SOCIETY.—A meeting of this society was held on Feb. 12th, Dr. Heywood Smith, the President, being in the chair.—Dr. H. Macnaughton Jones read two cases of Cysts in the Inguinal Canal. The first simulated a hernia and had been kept up by a truss, but became irreducible and increased in size and on operation was found to be a cyst containing blood and intimately connected with the round ligament in a patent canal of Nuck. The diagnosis in the second case also was difficult, but at an operation for salpingo-oöphorectomy and ventrofixation the round ligament was found spread out over, and intimately attached to, a cyst in an otherwise normal canal. Quoting a case of double inguinal hernia, ultimately fatal, mistaken for hydrocele of the round ligament, he concluded that every doubtful swelling in the inguino-labial region in women indicated operation.—Mr. F. Bowreman Jessett described an operation for the removal of a dermoid cyst of the right ovary. The appendix had been adherent to the tumour and was much thickened, and was removed after double ligature without turning back the peritoneum, Mr. Jessett having found from experiments on the cadaver that by ligaturing the appendix in its entirety the mucous coat was completely divided just as the inner coat of a tied artery. Mr. Jessett also showed a Uterus removed for hæmorrhage due to a submucous fibroid, some two years after a ventrofixation for retroversion and prolapse. Chromic gut sutures had been passed through peritoneum, fascia, and muscular tissue, but at the second operation there were merely some peritoneal attachments to the abdominal parietes, from one half to one inch long, sufficient to prevent the recurrence of the retroversion, and some omental adhesions, but nothing to interfere with pregnancy had it occurred—certainly there was no such support as would have prevented recurrence in a case of complete prolapse.—After some remarks by the President, Dr. L. Garrett Anderson, and Dr. F. A. Purcell, Mr. Jessett replied.—The President then delivered his Inaugural Address. He said that in 1884 after consultation with the leading gynæcologi-ts of the day, he had to draw up a plan and rules for the society and to convene the meeting at which it was constituted. Dr. Robert Barnes accepted the position of honorary President and happily was still with them, and Sir J. Halliday Croom, their late president, was a member of the first council elected. From the first it had been felt that the exhibition of specimens and the reading of cases should take precedence of more formal papers. In a comprehensive review of the work done by the society since its commencement he mentioned that 738 specimens had been shown, nearly all from operations and very few from necropsies. Of these, 243 were examples of fibroid tumours in the removal of which up to the year 1896 clamps and the serre-nœud were almost invariably employed, but since that date the prevailing method had been sub-peritoneal hysterectomy, and he congratulated the society on the share it had taken in the improved method of treating the stump. Of ovarian tumours 140 had been exhibited, chiefly in the earlier years, for ovariotomy had come to be regarded as no longer an operation to be deferred till a tumour had developed to an inconvenient or dangerous size and probably only the rarer forms were now thought worthy of being brought before the society; of those shown 26 were dermoid and 19 malignant growths, while 14 were instances of twisted pedicle. While this mass of material proved the vast importance of surgical methods in the relief of the diseases of women, it must not be forgotten that medical methods afforded no "chips from the workshop" for exhibition, though in medical gynæcology so-called there was no doubt much minor surgery. Their past work had, he believed, taught them that it was not the most anomalous cases that cast most light upon any form of disease and that each Fellow should bring forward any case that might show the advantage, or otherwise, of any special treatment; that it was well to follow up some particular subject till something definite had been obtained; and that vast fields for research remained for diligent investigation, for instance the etiology of cancer. He gave the details of the society's scheme for the examination of monthly and gynæcological nurses as already published.—A vote of

thanks to the President for his address, proposed by Dr. C. H. F. Routh and seconded by Mr. Jessett, was put to the meeting by Dr. Macnaughton Jones and carried by acclamation.

INCORPORATED SOCIETY OF MEDICAL OFFICERS OF HEALTH.—A meeting of this society was held on Feb. 13th, Dr. Arthur Newsholme, a Vice-President, being in the chair.—Dr. E. W. Hope, medical officer of health of Liverpool, opened a discussion upon the Renewal of the Vaccination Act. He urged the desirability of transferring the administration of the Vaccination Acts from boards of guardians to sanitary authorities and said it was anomalous that the only certain means of safeguarding the public from the dangers of small-pox should not be in the hands of that body which was responsible for the public health. He insisted upon provision being made for an adequate supply of lymph and suggested that depôts should be established in various parts of the country where lymph could be manufactured and supplied. On the question of giving false information or withholding information relating to small-pox when asked by the proper authority Dr. Hope quoted with approval a clause in the Liverpool Corporation Act, 1900, which made the occupier of a house liable to a penalty if he either refused information or gave false information relating to any person resident in the house who was or had been suffering from a dangerous infectious disease.—A series of motions which had been previously discussed at branch meetings and by the council of the society were brought before the meeting and with slight alterations were agreed upon. These resolutions expressed the opinion of the society that every child should be vaccinated before he or she was six months old; that any relief from this requirement should be by empowering magistrates to suspend vaccination for a definite period and not by unlimited exemption as at present; that a renewal of exemption should be applied for when a child reached the age of four years and again when he or she was 12 years old; that revaccination at 12 years should be required; that the Local Government Board should be empowered to require revaccination at an earlier age than 12 years in infected localities; that all "contacts" should be required to be vaccinated or revaccinated forthwith if the medical officer of health considered it necessary; that the administration of the Vaccination Acts should be in the hands of the metropolitan borough councils, the county borough councils, and (except in London) of the county councils, which last authorities should have power to delegate their duties to sanitary authorities; that the Local Government Board should undertake the duties imposed by the Acts in the case of defaulting councils; that a minimum standard of vaccination and revaccination should be prescribed by the Local Government Board; that a form of certificate of vaccination or of revaccination, stating the number, area, and description of marks produced, should alone be used by medical practitioners; that calf lymph guaranteed by the Local Government Board should be supplied on demand to every registered medical practitioner; that Government stations for the preparation of vaccine should be established in the provinces; and that all officials under the Vaccination Acts should have fixity of tenure of their offices. It was decided to ask the Epidemiological Society and the British Medical Association to join the society in an endeavour to obtain an interview with the President of the Local Government Board with a view to legislation being introduced in the next session of Parliament to secure such powers as those indicated in the above resolutions.—Sir Michael Foster, M.P., took part in the discussion and congratulated the society upon not having spent too much time upon the conscientious objector who in some way or other would have to remain. In his opinion the success of the struggle of vaccination against small-pox would depend not upon the conscientious objector but upon the improved development of the machinery of vaccination. He emphasised the importance of the utmost care being taken to secure the efficiency of the operation and the goodness of the material and said that he believed the greater part of the objections to vaccination came from the careless and imperfect way in which it had been performed.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.—The fourth meeting of the forty-seventh session of this society was held at the Royal Kent Dispensary, Greenwich-road, on Feb. 6th, Dr. George Herschell, the President, being in the chair.—After the election of four new members Mr. Charles J. Heath read a paper on Operative and Other Treatment of Chronic Suppuration in the Middle Ear. After giving briefly the pathology of the various causes of continued suppuration treatment was considered. Great stress was laid on the avoidance of syringing the ear and on the importance of drying the ear with suitable wool mops and afterwards passing the fluid remedy right through the ear and Eustachian tube to the naso-pharynx, so that it could be tasted. Under these conditions, and owing to the fact that good results depended on very frequent application of the remedy and therefore that patients must use it at home, he insisted on the use of a non-poisonous fluid. He used spiritus vini rectificatus and thought that if it were applied in the manner stated and pumped through to the pharynx, using the tragus as the pump, it would cure 30 per cent. of all cases. Removal of ossicles and membrane when diseased did not, as a rule, stop the discharge, for generally if the bones were diseased the attic and antrum were also affected and the complete post-aural mastoid operation should be carried out. The presence of granulations and bare bone in the tympanum did not show that the antrum was diseased; cases showing these characters were often rendered healthy and the purulent discharge was entirely stopped by the treatment which he advocated. In referring to the post-aural complete operation on the mastoid, he said that the long canal of the facial nerve was incomplete in three out of ten cases operated on and could be demonstrated by using the probe before any bone was removed by operation; further, knowing the exact position of the nerve it was the surgeon's duty to avoid injuring it and he thought that facial paralysis consequent on the operation was almost inexcusable. The locality of the two fenestræ should not be curetted, though the remains of the membrane and the two larger ossicles should be removed. Tight packing in the tympanum for 24 hours might destroy the hearing and that portion of the cavity should never be packed at all; he advocated the freest drainage and used a large drainage-tube through the split cartilaginous meatus and as an antiseptic application to the cavity on the completion of the operation said he could not speak too highly of the glycerine and iodoform emulsion. In sewing up the wound completely behind the ear he always made the anterior flap overlap slightly the posterior flap, as it made a better ultimate scar and prevented the ear turning outwards or becoming depressed into the enlarged meatus. His cases never had more than one large dressing put on the ear and that was at the time of the operation. On the second day after the operation the patients were practically always up and dressed. In hospital their stay was from one to three weeks. Mr. Heath showed six cases, in two of which the operation had been performed on both sides. In all of them the hearing was remarkably good and in most of them the hearing was as good as that of any member of the society present. He called the attention of the members to the small opening through which the operation was performed.—The paper was discussed by the President, Mr. J. P. Purvis, Mr. Chisholm Williams, and Mr. H. W. Roberts.—A vote of thanks was accorded to Mr. Heath who briefly replied.—The next meeting, on March 6th, will be clinical.

DERMATOLOGICAL SOCIETY OF LONDON.—A meeting of this society was held on Feb. 11th, Mr. Malcolm A. Morris being in the chair.—Dr. J. J. Pringle showed a man, aged 38 years, suffering from a Syphilitic Eruption on the Flexure of the Right Knee, the Face, and the Lips. The individual lesions consisted of deep-seated nodules which were softening in the centre. The duration of the oldest portion of the eruption, that on the knee, was 10 weeks, and there was a history of a sore on the penis 13 weeks before. The question arose as to whether this was a relapsing syphilide from a previous attack of which no history could be obtained or whether it was a precocious nodular syphilide.—Dr. E. G. Graham Little showed a case of Lichenoid Eruption, possibly Lichen Planus, in an Infant. The eruption consisted of an irregular patch on the inside of the right knee and two angular patches on the right lower abdomen and left groin respectively. He also showed a case of Prurigo Hebra in a woman. The features of the original trouble were obscured by the immense amount of chronic eczema present and there was very little sign of the initial lesion visible at the time of exhibition.—Dr. H. Radcliffe Crocker showed a young woman suffering

from Ulceration of the Legs; the ulcers were of about the size of sixpenny pieces and showed no infiltration of the base, being surrounded by pigmented skin. There were scars of former ulcers and the patient gave the history of wandering from hospital to hospital in search of relief. The diagnosis offered was that of dermatitis artefacta and this was accepted by all the members. He also showed a man suffering from a Pruriginous Eruption scattered over the body and extremities. The individual lesions appeared to be infiltrated follicular papules which became pustular, necrosed, and healed with scarring. The patient had multiple enlargement of the lymphatic glands and the diagnosis offered was that of pseudo-leukæmia also affecting the skin.—Mr. Arthur Shillitoe showed a case of unusually widespread Morbilliform Erythema in early syphilis. A careful inquiry had excluded any drug eruption and the rash had already persisted for some weeks.

MEDICO-LEGAL SOCIETY.—A meeting of this society was held on Feb. 10th, Sir W. J. Collins, the President, being in the chair.—The adjourned discussion upon Dr. H. Littlejohn's paper on Medico-Legal Post-mortem Examinations was carried on in the same friendly and animated manner as at the opening meeting. The speakers upon the subject were unanimous in support of calling in a skilled pathologist, about which so much had been heard of late, and a comparison was drawn between the English and Scottish procedure in matters of investigation.—Mr. F. Gordon Brown, who was employed by the police at the time, read a paper upon the Whitechapel Murders. After describing in detail the terrible story of murder and mutilation he endeavoured to come to a conclusion as to the character of the murderer; it could not, he said, be due to robbery or jealousy considering the depraved natures of the victims, neither was it for the satisfaction of sexual lust, for in no case had there been violation, but he concluded that it must have been the act of an insane man with full knowledge as a slaughterer and must be classed under the term of Sadism.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Feb. 4th, Mr. J. Mackie, the President, being in the chair. Dr. A. S. Green (Lincoln) showed x-ray photographs of (1) Spiral Fracture of Tibia; (2) Congenital Malformation of Foot; (3) Empyema of Left Chest; and (4) Impaction of Surgical Neck of Humerus.—Mr. W. A. Howitt showed an x-ray photograph of a Spiral Fracture of the First Phalanx of the Ring Finger of the Right Hand.—The President, Dr. W. Hunter, and Dr. F. H. Jacob discussed the cases.—Dr. Jacob read a paper on Quacks and Quack Medicines which had been compiled by Mr. S. R. Trotman and himself. Many well-known patent medicines had been analysed, the greater part of the analyses being performed by Mr. Trotman, and the formulæ for these were presented to the meeting.—An excellent discussion followed in which the President, Mr. W. M. Willis, Mr. T. Geraty, Dr. C. H. Cattle, Dr. W. Hunter, Dr. A. Fulton, Dr. Green, Mr. J. Thompson, and Dr. Parry-Jones took part, and Dr. Jacob replied.

EDINBURGH ROYAL MEDICAL SOCIETY.—A meeting of this society was held on Feb. 13th. Dr. A. B. Ross, senior President, being in the chair.—Mr. R. M. Johnstone communicated notes on a case of Myositis Ossificans. The patient was a man, aged 35 years, who was shown before the society. The condition began when he was eight years old and had become gradually worse with acute exacerbation at varying intervals. During the acute stage the muscles were swollen and very painful and after the symptoms had passed off ossification set in. Many of the joints were ankylosed. The muscles of the abdomen were not affected at all.—Dr. W. M. McFarlan read a paper on Abdominal Pain.

WIGAN MEDICAL SOCIETY.—The annual meeting of this society was held on Feb. 12th, Mr. T. M. Angior, the President, being in the chair. There was a good attendance of members present. After the election of office-bearers a social evening was agreeably spent. The following gentlemen were elected office-bearers for 1903:—President: Dr. Matthew Benson. Committee: Dr. Benson (President), Mr. T. M. Angior (ex-President), Mr. W. Mitchell Roocroft, Dr. R. P. White, Mr. C. M. Brady, Dr. John Blair, Dr. Ferdinand Rees, Dr. George Wolstenholme, and Mr. Winstanley. Treasurer: Mr. E. H. Monks, J.P. Honorary secretary: Mr. William Berry

Reviews and Notices of Books.

Diseases of the Pancreas and their Surgical Treatment. By A. W. MAYO ROBSON, F.R.C.S. Eng., Senior Surgeon, Leeds General Infirmary; Emeritus Professor of Surgery, Yorkshire College, Victoria University; and B. G. A. MOYNIHAN, M.S. Lond., F.R.C.S. Eng., Assistant Surgeon, Leeds General Infirmary; Consulting Surgeon to the Skipton Hospital and to the Mirfield Memorial Hospital. Illustrated. London and Philadelphia: W. B. Saunders and Co. 1902. Pp. 293. Price 12*s.*

IT is only within recent years that any material progress has been made in regard to our knowledge of the functions and diseases of the pancreas. The experience gained by pathologists, however, demonstrates that this organ not infrequently proves a source of serious, and often fatal, disease. The authors of the work now under consideration state that they have had a twofold object in the publication of a book dealing with the surgical aspects of pancreatic disease—namely, to record and to review the investigations accomplished in the past and to indicate, as far as is possible, the scope and trend of future research.

The first chapter deals with the Anatomy of the Pancreas. Due credit is given to the admirable works of Körte and Oser, and the results of the inquiries of Opie and others into the functions and significance of the islands of Langerhans. Chapter II. deals with the conclusions arrived at by the many observers who have conducted experimental researches on the organ, more especially in regard to the artificial production of diabetes. It has been clearly shown that total extirpation of the pancreas produces all the symptoms of diabetes. Glycosuria, however, does not appear when any portion of the gland—head, body, or tail—is left, but at once manifests itself if the remnant be subsequently removed. Very interesting are the remarks on Pancreatic Diabetes in Man. The authors conclude that in a large number of cases diabetes is associated with, or accompanied by, disease of the pancreas, the most frequent of which is a chronic interstitial inflammation and sclerosis. On the other hand, however, cases of diabetes occur in which there is no demonstrable affection of the pancreas and cases of chronic interstitial inflammation are seen without the phenomena of diabetes. The valuable researches of Opie are again referred to. From pathological observations this authority maintains that the destruction of the islands of Langerhans is concerned in the production of diabetes and this view is maintained by the experimental work above alluded to.

The condition of Inflammation of the Pancreas is fully considered, four chapters being devoted to this subject. The authors' classification of pancreatitis differs from that adopted by some other authorities. Mr. Mayo Robson and Mr. Moynihan are of opinion that it is convenient to consider pancreatitis clinically under the headings of (1) acute, (2) subacute, and (3) chronic, which does not interfere with Fitz's pathological classification of acute pancreatitis into hæmorrhagic, suppurative, and gangrenous. We agree with the authors that for clinical purposes the plan they have decided upon is quite satisfactory. The symptoms, diagnosis, and treatment of these forms of pancreatitis are well described although some of the cases recorded might have perhaps been given more succinctly. The remarks on the treatment of chronic pancreatitis are especially worthy of note. The authors maintain that cases of this nature must be treated by abdominal section and drainage, but the drainage should be indirect and obtained by draining the gall-bladder by cholecystotomy or cholecystenterostomy or the pancreatic and common bile duct together by duodeno-choledochotomy; the exact line of treatment cannot be determined until the abdomen is

opened. The results of treatment in chronic pancreatitis have been most encouraging, as out of 24 cases operated on only one patient died directly from operation and he had been reduced to the last stage of exhaustion before a surgical opinion was sought. Of the 23 patients recovering from operation, with the exception of two who died a few months later, complete and perfect recovery ensued. The authors point out that these results contrast very markedly with the surgical treatment of cancer of the pancreas, where nearly half of the patients operated on have died directly as the result of operation and in those who have survived life has only been prolonged for a comparatively short time.

The subject of Pancreatic Cysts is very fully considered. The following classification is adopted and is probably as precise as our present knowledge permits: (1) retention cysts, (2) proliferation cysts (cystic adenoma and cystic epithelioma), (3) hydatid cysts, (4) congenital cystic disease, (5) hæmorrhagic cysts, and (6) pseudo-cysts. The authors admit that from a pathological standpoint the inclusion of the last form is not permissible. As, however, the clinical features tally precisely with those of true pancreatic cysts, the academic objection rightly gives way to considerations of convenience. The book concludes with a chapter on New Growths of the Pancreas.

The work, as a whole, is an interesting and valuable contribution to our knowledge of pancreatic disease and the authors have been successful in carrying out the objects which they had in view.

Methods and Theory of Physiological Histology. By GUSTAV MANN, M.D., C.M. Edin., B.S. Oxon., Senior Demonstrator of Physiology in the University of Oxford. Oxford: At the Clarendon Press. 1902. Pp. 488. Price 15*s*.

THIS work is intensely practical and its value is due to the fact that the methods described are based largely upon the researches of the author assisted by his colleagues. The author states that nobody realises what labour there is before the histologists and he is hopeful that the publication of his book if it fulfils no other purpose will serve to bring out deficiencies in theories and in methods. That is a very philosophic view. The work is divided into eight parts. In Part I. are chapters upon the value of fixation and the chemicals used as the agents of fixation, the macroscopical effects of fixing reagents, the microscopical phenomenon of coagulation and precipitation, and instructions as to the selection of the "fixative." This section is, perhaps, the most valuable in the work, as it is the lengthiest. Part II. contains chapters on bleaching, isolating, and decalcifying, and on injecting blood and lymph vessels. Methods of obtaining sections and a history of microtomes and how to use them are described in Part III., while Part IV. is devoted to the nature of dyes and to the history of the methods of staining. In this section a most interesting historical account of staining is given. The author rightly asks the reader to reflect occasionally on the work accomplished by older histologists without the aid of stains. The method probably commenced in the early "fifties" and it is hardly possible to estimate how valuable an instrument dyes have been to the modern histologist and bacteriologist. A means of differentiation was thus opened up which otherwise could not have been possible. The section dealing with staining is, again, on account of its great importance, very exhaustive.

Passing over Part V. and Part VI., the latter dealing with the chemistry of some tissue constituents and microchemical reaction, we come to Part VII. in which in Chapter XXIV. the theory of staining is discussed, and here we cannot help quoting the author's excellent views as to the objects of staining which are as follows: 1. To help us in determining morphological facts. In this case all methods, no matter whether physical, chemical, or physico-chemical, are justified. 2. To recognise microchemically the existence and distribution of substances which we have been made aware of by macro-chemical means. It is not sufficient to content ourselves with using acid and basic dyes and speculating on the basic or acid nature of the tissues or to apply colour radicals with oxidising and reducing properties, but we must endeavour to find staining reactions which will indicate not only the presence of certain elements, such as iron or phosphorus, but the presence of organic complexes, such as the carbohydrate group, the nucleins, protamins, and others. In this last sentence are summed up the spirit and substance of the work. Finally, Part VIII. contains one chapter devoted to the methods of rendering preparations permanent and an appendix follows which gives shortly the chemistry and constitution of the dyes.

We most heartily congratulate the author on the accomplishment of a very big task. He could not have achieved it without a very sound acquaintance with the modern developments of physico-chemical phenomena. The materials have been collected with evident care and were largely drawn from the author's own researches. The book is full of most valuable practical instructions bearing upon histological methods and altogether this important branch of study is certain to gain considerably by this admirable attempt to elucidate principles.

A Text-Book of Obstetrics for Practitioners and Students. By various authors. RICHARD C. NORRIS, M.D., Editor; ROBERT L. DICKINSON, M.D., Art Editor. With nearly 900 Illustrations. Second edition, revised, Vol. I., pp. 554; Vol. II., pp. 549 London and Philadelphia: W. B. Saunders and Co. 1902. Price 35*s*. net.

SINCE the first edition of this book appeared many important advances have been made in the art of obstetrics. As the editor points out, the results of bacteriological and chemico-biological researches as applied to the pathology of midwifery and the wider range of surgery in treating many of the complications of pregnancy, labour, and the puerperal period embrace many new problems, some of which have found their final place in obstetric practice. It has been thought proper, therefore, to issue a thorough revision of this text-book. Unfortunately, since the appearance of the first edition, Dr. T. Parvin, Dr. J. H. Etheridge, and Dr. C. W. Earle have died. The chapters originally written by Dr. Etheridge have been rewritten by Dr. Clarence Webster, whose name appears for the first time as one of the contributors and the editor has revised the portions written by Dr. Parvin and Dr. Earle. Considerable evidence of alteration and revision is present in different parts of the book. The section upon Diseases of the Ovum has been very largely added to and is now much fuller and more satisfactory than it was in the first edition. In the section upon the Diseases of the Placenta we note with satisfaction that the old heading "placentitis" has disappeared, and it is pointed out that much of the work published dealing with diseased conditions of the placenta is worthless because it was done at a time when the true nature of the placenta was not properly known. The views of Dr. D. Berry Hart upon the mechanism of abortion are given and a very interesting illustration of the condition known as tuberose subchorionic hæmatoma of the decidua has been added. How thoroughly the section of the book dealing with the Pathology of Pregnancy has been revised is shown by the fact that the bibliography contains some 200 additional references. A very full and interesting account is given of the condition known at the present day as the toxæmia of pregnancy and the toxic origin of eclampsia is accepted as the most likely cause of that disease. In discussing the treatment of eclampsia the principles laid down

are that the convulsions should be controlled, elimination stimulated, and the uterus emptied. The administration of chloroform and oxygen is recommended but ether should be used for any prolonged operative measure. The author of the section, Dr. Davis, recommends the avoidance of pilocarpine, the administration of large doses of morphia, the practice of venesection, profound and prolonged anæsthesia, and rapid emptying of the uterus when no sign of spontaneous labour is present. When the circumstances are favourable, however, and the cervix cannot readily be opened Cæsarean section may be performed. No doubt in future editions, if rapid emptying of the uterus be still advocated, the employment of Bossi's dilator will take the place of Cæsarean section in such cases. There is much more new matter that has been added to many of the other sections but we must refer our readers to the book itself. It is a most valuable work and will prove of service not only to students and practitioners but also to teachers of the science and art of obstetrics. A number of new illustrations have been added and some of the old have been re-drawn. The book is now published in two volumes, each with separate paging and index. There is also a general index which is not so full as might be wished in such an important text-book.

Madrid bajo el Punto de Vista Médico-social. Por el Dr. PH. HAUSER, &c. Dos partes. Madrid. 1902. 8vo, pp. 919. Price 25 pesetas. (*Madrid from the Medico-social Point of View.* By Dr. PH. HAUSER, &c. Two volumes. Madrid. 1902. Price about 14*s.* 6*d.*)

DR. HAUSER has undertaken the gigantic task of pointing out in detail the sanitary defects of Madrid as compared with other great cities, and in so doing he has not spared the country of his adoption. He has taken great pains in the years during which he has resided in Madrid to ascertain thoroughly the sanitary condition of the town, and in his endeavours he has been rather thwarted than aided by the authorities. It is satisfactory to learn from the preface to the second volume that his book has been well received by the medical profession in Spain, and it is to be hoped that its members will use what authority they have in procuring a reform of the many faults which he points out.

The book begins with the history of the evolution of sanitation in Madrid from its foundation to the present time, with a complete topographical and geological description of the city, its soil, and the effect of the soil upon its climate and hygiene. Dr. Hauser devotes a whole chapter to an account of the different methods of purification of sewage and of the prevention of contamination of the soil—a chapter very necessary in Spain where even the most elementary knowledge of hygiene is lacking. He then proceeds to describe very accurately the system of sewerage in Madrid, pointing out the course and the defects of the existing sewers. He states that 431 streets are entirely destitute of sewers, that 93 streets are but partially drained, and that in the 586 streets which are supposed to be properly sewered there are hardly *100 houses* (*sic*) which are really in a thoroughly sanitary condition. The author next describes the different varieties of material used on the roads and the methods adopted in cleansing the roads, comparing these with those employed in Paris and in Berlin. Next we are informed about the sources and state of the drinking water which is not filtered and contains, besides other impurities, from 1650 to 2860 bacteria per cubic centimetre and is at times offensive to sight and smell. Fortunately the wines are good and cheap and *chufa* makes an excellent summer drink if the drinker can only be sure that the water with which this root of the *Cyperus esculentus* is mixed has been boiled. Dr. Hauser passes next to the workmen's quarters in Madrid; these are wretched barracks with no water-supply, no ventilation, very little light, and no attempt at drainage in the houses or streets. These quarters are naturally nests of infectious diseases. There are in Madrid town 438 houses which harbour 52,655 persons, or an average of 110 inhabitants per house, the actual numbers varying between 107 and 152 per house. Dr. Hauser, after describing the attempts made in England, France, Germany, and Belgium to improve artisans' dwellings, mentions some private societies founded in Madrid with this object. He next treats of the slaughter-houses, markets, and butchers' shops in Madrid and their deficiencies. After this comes a critical description of the hospitals in Madrid. The author also criticises the theatres, schools, churches, barracks, and public-houses in Madrid, and concludes his first volume with the demography of the town, discussing the density of population, the birth-rate, the mortality, and the number of marriages during a series of years. He gives a large coloured plan of the town showing the rate of mortality in the various districts.

As the first part of this work treated of social hygiene, so the second part, which appeared in December, 1902, treats of medicine from the public health point of view and begins with a general dissertation on the etiology of infectious diseases, proceeding to a description of the mortality from the different varieties of infectious disease, the author expressing a decided opinion that it is the soil of Madrid, not the water or the air, which is the cause of the prevalence of infectious deisases there. From the tables given it would appear that tuberculosis, small-pox, and measles are the most fatal diseases in Madrid; typhoid fever, scarlet fever, and puerperal fever have a much smaller death-rate than the first-named maladies. Dr. Hauser doubts whether mosquitoes are the cause of paludism. Syphilis and other venereal diseases are discussed at length, the conclusion arrived at being that police regulation of prostitution is ineffectual for the prevention of venereal disease, which is certainly true in Spain where the regulations are lax and are constantly evaded.

A whole chapter is devoted to the causes of the mortality among the lower orders in Madrid and another to the connexion between the frequency of disease and meteorological conditions. The book ends with an account of the sanitary measures which have been adopted by the police in various epidemics. In an appendix by Dr. Montaldo there is a comparative analysis of the sanitary legislation of France, Italy, Portugal, and Spain.

The book is of necessity large and cumbrous, because the author has been obliged to describe minutely even the simplest sanitary matters which are new to his readers though familiar to us from long experience. It is impossible in the limited space of a review to do justice to the amount of care and pains which Dr. Hauser has expended on this work or to the excellence of the results in spite of the difficulties which he met with.

Legal Medicine (in India) and Toxicology. In two volumes. By Major COLLIS BARRY, I.M.S., F.R.S. Edin., Chemical Analyser to the Government of Bombay; Professor of Chemistry, Medical Jurisprudence and Toxicology, Grant Medical College, Bombay. Illustrated by Plates. Vol. I. Bombay: Thacker and Co., Limited. Pp. 585.

THIS work was originally undertaken to supply a text-book for the students of the Indian colleges. The author states in his preface that the mass of material collected for the book is so large that it was deemed advisable to transfer the greater number of the illustrative cases to a separate volume. As a manual of jurisprudence this publication is certainly deserving of praise. The various subjects are judiciously dealt with; the method of arrangement of the chapters into paragraphs by means of heavy type is useful both for purposes of study and reference; and we believe that students will find the work a trustworthy text-book when preparing for their examinations. As the

title indicates, the book is intended more particularly as a guide to medico-legal work in India. Many subjects, therefore, are discussed which are not to be found in the purely English manuals, as the law of India is different from that of England in certain matters which come under the notice of the medical jurist. For instance, Chapter VI., which deals with the subject of Age, contains details of the Indian Penal Code in relation to certain acts which are not otherwise offences, but become offences when done to persons below certain ages which are specified. There is also a material difference as to the age of "consent" in trials for rape according to the English and Indian laws.

The chapter on Infanticide will be found interesting. In most countries infanticide is resorted to in order to get rid of the offspring of illegitimate intercourse or of the legitimate children of parents too poor to support an additional tax on their resources. In India, however, there are reasons specially referable to the social conditions that exist amongst certain races which account for the destruction at birth of children and more particularly of female children. These reasons are fully discussed and disclose conditions which happily are gradually disappearing under British rule.

The section on toxicology, however, in our opinion forms the most instructive portion of this volume. Much that is contained in this part of the work is beyond the requirements of the student for examination purposes but forms valuable material for reference. Many poisonous substances are dealt with and in the chapters devoted to vegetable poisons plants are mentioned which are peculiar to tropical countries and several excellent plates are introduced representing the appearance of some of the plants. The methods employed for detecting the poisons are clearly given and the medico-legal points which may arise are fully discussed. We can cordially recommend this volume to those readers for whom it is intended.

LIBRARY TABLE.

Spirals in Nature and Art. By THEODORE ANDREA COOK, M.A., F.S.A., with a preface by Professor E. RAY LANKESTER, F.R.S. London: John Murray. 1903. Pp. 200. Price 7*s.* 6*d.*—Some time ago Mr. W. Lethaby wrote a most interesting book entitled "Architecture, Mysticism, and Myth," in which he pointed out how architectural forms and decorations were derived from the study of natural objects or developed with a view to symbolise natural phenomena. Mr. Cook has taken a portion of the same very wide subject for his charmingly written essay. He discourses upon spirals and draws attention to the fact that the exquisite spiral staircase in the Château of Blois was evidently modelled upon the form of a shell—namely, *Voluta vespertilio* and that upon the rare reversed variety, the spiral being left-handed. Mr. Cook is of opinion that the architect of this wonderful staircase was Leonardo da Vinci. That great man, of course, lived for some time in the Loire valley and was buried at Amboise. He was certainly capable of building the staircase in question and, as Mr. Cook proves from the drawings which he left behind him, Leonardo da Vinci took great interest in spirals. He was also left-handed, which would account, thinks Mr. Cook, for the staircase having a left-handed spiral. Whether Mr. Cook be right or not about Leonardo da Vinci does not very much matter, but we think that he certainly makes out a very strong argument for the staircase having been modelled from the shell. Many other examples of spirals and spiral growth in animals and plants are given, but there is a screw formation which Mr. Cook does not refer to, and although perhaps it comes under the heading of neither nature nor art we may call attention to it. We mean that obtained by dipping a helix of wire with a central supporting column into soap film. The beauty of the resulting surface is very remarkable. Architects will find Mr. Cook's little book very interesting.

"The Green Republic": a Visit to South Tyrone. By A. P. A. O'GARA, M.D. London: T. Fisher Unwin. 1902. Pp. 244. Price 6*s.*—Any light thrown on the Irish agrarian and land question should be welcomed, but it is to be feared that Dr. O'Gara's book, which deals exclusively with this subject, will not, to any appreciable extent, enlighten the darkness which enshrouds this complex subject. Dr. O'Gara's views are set forth in the preface, introduction, and conclusion of the work; the rest consists of 12 sketches, or rather dialogues, which merely serve to elaborate and to illustrate his arguments in the form of somewhat wordy and diffuse discussions on the various points. Dr. O'Gara takes an extraordinarily pessimistic view of the Irish land problem and has a very poor opinion of Irish tenants as a class. He appears to be convinced that any hope of Irish tenants working out their own salvation (and incidentally that of their country) by eventually becoming the owners of their own land is quite futile—a view, by the way, diametrically opposed to that of the recent land conference held at Dublin between representatives of the landlords and of the tenants. Dr. O'Gara advocates as a panacea for the evil the working of the land by joint-stock companies run on strictly business lines—a suggestion quite outside the domain of practical politics. To earnest students of the Irish land problem this book will be of much interest.

JOURNALS AND MAGAZINES.

Journal of Anatomy and Physiology. Conducted by Sir WILLIAM TURNER, K.C.B., F.R.S.; D. J. CUNNINGHAM, M.D., F.R.S.; G. S. HUNTINGTON, M.D.; A. MACALISTER, M.D., F.R.S.; and J. G. M'KENDRICK, M.D., F.R.S. Vol. XXXVII. Part 2. January, 1903. With Plates and Figures in the Text. London: Charles Griffin and Co., Limited. 8vo. Price 6*s.*—The contents of this number are as follows: 1. Johnson Symington, M.D. Edin., of Belfast: Are the Cranial Contents displaced and the Brain damaged by Freezing the Entire Head? (with a plate.) The author comes to the conclusion in opposition to Professor Froriep that no alteration in these respects is effected by freezing. 2. R. Broom, M.D. Glasg., on the Development of the Pterygo-quadrate Arch in the Lacertilia. In this article the author demonstrates the occurrence of a cartilaginous connexion between the quadrate and epipterygoid in various and very diverse lacertilian embryos, rendering it practically certain that the immediate ancestors of the lizards were possessed of a fixed quadrate as in sphenodon, a point of considerable importance in classification. 3. O. Charnock Bradley, M.B. Edin., professor of anatomy, Royal Veterinary College, Edinburgh, on the Development and Homology of the Mammalian Cerebellar Fissures, Part i., with five plates. This article describes the formation of fissures in the cerebellum of rodents. 4. H. W. Marett Tims, B.A. Cantab., M.D. Edin., the Evolution of the Teeth in Mammalia. 5. J. O. Wakelin Barratt, M.D. Lond., the Form of the Dilated Cerebral Ventricles in Chronic Brain Atrophy, with numerous woodcuts. 6. Walter H. Gaskell, F.R.S., on the Origin of Vertebrates deduced from the Study of Ammocœtes, Part xi. This part deals with the origin of the vertebrate body cavity and excretory organs and is an attempt to explain the meaning of the somites of the trunk and of the ductless glands. Dr. Gaskell endeavours to show in these interesting papers that the ancestor of the vertebrates was not an arachnid purely or a crustacean purely but possessed partly crustacean and partly arachnid characters. 7. The Proceedings of the Anatomical Society of

Great Britain and Ireland which contain amongst other articles a particularly valuable one by Arthur Keith, M.D. Aberd., on the Heart.

The Phonographic Record of Clinical Teaching and Medical Science. February, 1903. Issued by the Society of Medical Phonographers. London: Sir I. Pitman and Sons, Limited. Pp. 16. Price 6*d*.—This number contains an account of three cases of stab wound of the liver in a Chinese and two Malays recorded by Mr. R. M. Connolly, district surgeon, Batu Gajah, Perak. Mr. Connolly says that in a country such as this, in which tropical abscess is not uncommon, it may be thought that the surgery of the liver is limited solely to the opening of tropical abscess of that organ, but that a short residence in a district where highway robbers walk the roads would be sufficient to dispel the delusion. There are also some notes of clinical teaching by Sir William R. Gowers which were taken some years ago on the case of a man, aged 65 years, who suffered from paralysis agitans and senile cerebral degeneration. Sir William Gowers says that it is probable that paralysis agitans consists of a degeneration of the nerve elements of the motor cortex, but that it is an internal change too slight to be expressed by structural decay. He adds that only a minority of the cases correspond to the types described in text-books. Dr. J. C. M. Given gives particulars of the case of a man, aged 65 years, whom he has had under observation for the last ten years. He had an attack of kidney trouble 30 years ago, and Dr. Given has attended him for four attacks. The urine contained blood cells, albumin, and casts, both granular and epithelial. He kept to practically a white meat diet and for several months was a pure vegetarian with the exception of milk, but the albumin never disappeared. For the last two years he has been attacked with a severe form of rheumatoid arthritis and on this account he has been allowed a much more liberal diet with plenty of red meat; and now a curious thing is that he has been almost completely free from albumin. His general health is now good apart from the crippled state of his joints. The secretary of the society reports that the number of members is now 184 against 203 at the commencement of the year, and that another examination will be held this year, in May; although the finances of the society are not sufficiently good to be able to give two £5 prizes, it has been decided to offer two £3 prizes. Those thinking of presenting themselves for the examination should write to Dr. P. G. Griffith, Bonhams, Farnborough, Hants. There also appears to be some difficulty in collecting the subscriptions, judging from an appeal which is printed in the *Record*.

The Practitioner.—The February issue of the *Practitioner* contains much weighty food for thought. Whether the reader has a medical, a surgical, or a purely speculative bias, he will find something to his taste either in the eloquent writing of Professor T. Clifford Allbutt, the deep chemistry of Dr. Walter G. Smith of Dublin, or the practical suggestion of Mr. A. W. Mayo Robson. A short article by Dr. E. W. Ainley Walker sums up well the present claims of the micrococcus of rheumatism to be admitted as a "specific" agent and points the direction for further investigations. The endless interest and obscurity of the origin of eclampsia in the pregnant woman are treated by Dr. W. E. Fothergill and articles are contributed by Mr. Stephen Paget, Mr. Harold L. Barnard, and Mr. E. Treacher Collins amongst others.

HEALTH OF CLEVEDON.—Mr. W. J. Hill, the medical officer of health, at the meeting of the Clevedon (Somerset) urban district council held on Feb. 4th presented his annual report for 1902. The population of the town was 5896, the birth-rate was 18·3 per 1000, and the death-rate was 12·9 per 1000.

Analytical Records
FROM
THE LANCET LABORATORY.

"MARMITE" FOOD EXTRACT.

(THE MARMITE FOOD EXTRACT CO., LIMITED, 40, MINCING-LANE, LONDON, E.C.)

MARMITE extract is prepared from the yeast cell which, as is well known, contains important food constituents. The extract is hardly distinguishable as regards appearance, taste, and smell from ordinary extract of meat, while our analysis shows that it has a similar composition. The results were as follows: moisture, 28·80 per cent.; albumins, 1·10 per cent.; peptone, 4·76 per cent.; albumose, 9·92 per cent.; nitrogenous basis, 20·63 per cent.; mineral matter, 25·42 per cent.; and non-nitrogenous matter by difference, 9·37 per cent. The total nitrogen amounted to 5·78 per cent. In this analysis attention may be called to the peptone, albumose, and the mineral matter, the last being rich in phosphatic salts. This entirely vegetable extract possesses according to these results the same nutrient value as a well-prepared meat extract.

"GRANALT" PREPARATIONS.

(THOMAS CHRISTY AND CO., 4, 10, AND 12, OLD SWAN-LANE, UPPER THAMES-STREET, LONDON, E.C.)

As its name implies "granalt" consists of dry granulated malt extract. It is a crisp powder with a pleasant malty taste but exhibits no diastatic action on starch, according to our experiments. The preparation of course contains the soluble constituents of malt. Granalt appears to be an excellent vehicle for cascara sagrada, the glycero-phosphates, and even castor-oil.

THROGMORTON WHISKY.

(J. LYONS AND CO., CADBY HALL, KENSINGTON, LONDON, W.)

Our analysis of this whisky corresponds very closely with that of a Scotch whisky (known to be all malt and eight years old) which was quoted in the report of THE LANCET Special Analytical Commission on Brandy published in THE LANCET of Nov. 29th, 1902, p. 1503. Thus the figures in regard to the secondary products were as follows, given in grammes per hectolitre of alcohol (100°): volatile acids, calculated as acetic acid, 42·08 grammes; fixed acids, calculated as tartaric acid, 19·00 grammes; aldehydes, 26·30 grammes; furfural, 4·25 grammes; ethers (ethyl acetate), 72·19 grammes; higher alcohols, 212·80 grammes. These results are in perfect accord with the statement that the whisky is an all-malt spirit and without the addition of grain spirit, moreover the results indicate age. Further results of analysis were as follows: extractives, 0·11 per cent.; mineral matter, 0·02 per cent.; absolute alcohol, by weight 40·15 per cent., by volume 47·51 per cent., equal to proof spirit, 83·26 per cent. The whisky thus contains a minimum of extractives and saccharine matters and is pale in colour and although an all-malt spirit is delicate in flavour. The presence of fixed acids and a notable proportion of ethers indicate storage in a sherry cask.

COGNAC BRANDY.

(BROWN AND PANE, 16, MARK-LANE, LONDON, E.C.)

On submitting this specimen of brandy to analysis the following were the results: extractive matters, 1·08 per cent.; mineral matter, *nil*; and alcohol, by weight 50·39 per cent., by volume 58·23 per cent., equal to proof spirit 102·05 per cent. The samples were taken directly from bond and therefore the alcoholic strength shown is about 10 per cent. in excess of the usual strength of brandy on the market. In other words, this is the analysis of the brandy before it has been "broken down." As regards

secondary products upon which, according to our view, the question of whether or not the spirit is genuine brandy can be decided, the following were the results recorded in grammes per hectolitre of alcohol (100°): acidity, calculated as acetic acid, 82·08 grammes; aldehydes, 14·24 grammes; furfural, 1·36 grammes; ethers, expressed as ethyl acetate, 90·28 grammes; and higher alcohols, 129·96 grammes. We have no doubt that this brandy is genuine grape spirit and of a good class, and it is stated that it is a blend of various shipments by well known Cognac growers. The amount of extractives is somewhat high, while the colour is dark rather than pale. The sample possessed the pleasing flavour and aroma of mature Cognac brandy.

(1) INVALID PORT; AND (2) PORT MATURED IN NEWFOUNDLAND.

(HUNT, ROOPE, TEAGE AND CO., 3 AND 4, WATER-LANE, GREAT TOWER-STREET, LONDON, E.C.)

1. On analysis the invalid port gave the following results: total extractives, 8·34 per cent.; mineral matter, 0·18 per cent.; alcohol, by weight 18·85 per cent., by volume 23·10 per cent., equal to proof spirit 40·48 per cent.; volatile acidity, calculated as acetic acid, 0·072 per cent.; fixed acids, calculated as tartaric acid, 0·21 per cent.; and sugar, 7·10 per cent. This is a good full fruity wine soft to the taste and dark in colour; it is said to be produced in the best district of the Alto Douro. An interesting point in regard to the analysis is that we found distinct traces of manganese in the mineral matter. The wine is mature yet full-bodied and suitable as a restorative in special cases. 2. This wine is of the "tawny" type. Analysis gave the following results: extractives, 8·07 per cent.; mineral matter, 0·22 per cent.; alcohol, by weight 18·08 per cent., by volume 22·18 per cent., equal to proof spirit, 38·87 per cent.; volatile acid, *nil;* fixed acids, calculated as tartaric acid, 0·15 per cent.; and sugar, 7·10 per cent. This is practically a non-acid wine. It is said to have been matured in Newoundland. It possesses excellent æsthetic qualities. Both specimens are good sound wines and suitable for invalid use.

PENFOLD'S AUSTRALIAN WINES.

(J. G. THOMSON AND CO., 17, FENCHURCH-STREET, LONDON, E.C.)

These specimens are interesting in proving that Australian wines imported into this country need not necessarily be of a heavy character. The following are the results of the analysis of a specimen of claret and of a specimen of chablis. Claret No. 0: extractives, 2·63 per cent.; mineral matter, 0·28 per cent.; alcohol, by weight 11·15 per cent., by volume 13·81 per cent., equal to proof spirit 24·19 per cent.; volatile acids, calculated as acetic acid, 0·096 per cent.; fixed acids, calculated as tartaric acid, 0·23 per cent.; and sugar, 0·43 per cent. Chablis No. 1: extractives, 1·86 per cent.; mineral matter, 0·2 per cent.; alcohol, by weight 11·08 per cent., by volume 13·71 per cent., equal to proof spirit 24·03 per cent.; volatile acids, calculated as acetic acid, 0·12 per cent.; fixed acids, calculated as tartaric acid, 0·35 per cent.; and sugar, 0·57 per cent. Both are sound, light, agreeable wines.

CHAD VALLEY PINE PAPER.

(JOHNSON BROTHERS, CHAD VALLEY WORKS, HARBORNE, NEAR BIRMINGHAM.)

We have examined specimens of this paper and amongst other things found that ether extracts a resinous oil possessing a smell of fresh sawdust. The addition of this oil is regarded as a sanitary precaution.

BARDELLA BANDAGE.

(AGENTS: DOWN BROS., 21, ST. THOMAS'S-STREET, LONDON, S.E.)

The bardella bandage consists of a roll of lint loaded heavily with a mineral powder which, according to our examination, contained chiefly bismuth and zinc. The bandage is well spoken of as an application for burns, scalds, and injuries. It certainly has a soothing and healing effect upon burns. The bandage admits, of course, of a number of useful applications.

STERILISING SOAP.

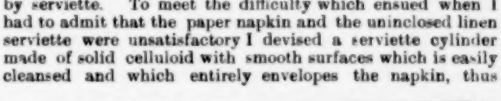
(F. S. CLEAVER AND SONS, 32, 33, 34, RED LION-STREET, HOLBORN, LONDON, W.C.)

This soap is excellent in use, lathers well, and contains no free alkali. In the course of its preparation a volatile antiseptic substance is added owing to which, we assume, the soap is regarded "as a preventative against bubonic plague and malaria." Of course, the free use of soap is always calculated to preserve the cleanliness of the person and the conjoint use of an antiseptic with it is no doubt an advantage in some circumstances. But it is an exaggeration to say that this soap would prevent bubonic plague and malaria.

New Inventions.

A SERVIETTE CASE FOR OPEN-AIR SANATORIUMS.

EVERYONE who has experience of sanatorium life is familiar with the table napkin question. At many open-air institutions the patients are provided with Japanese paper serviettes, but nine out of ten patients object to the sensation of applying the paper napkin to their mouths and the tenth does not like its smell, and nearly all would rather be deprived of serviettes altogether than be dependent upon the paper variety. There are objections to the use of the linen napkin in that being used for more than one meal and packed away in a drawer in the interval with only the protection of the napkin ring an undesirable contact between the serviettes of different patients is unavoidable. The phthisical patient who not only uses his table napkin in the ordinary manner but instinctively raises it to his mouth when obliged to cough at table cannot fail to infect it with tuberculous bacilli, and since the aim of every sanatorium superintendent must be to achieve the most perfect possible condition of hygiene in his institution he cannot afford to risk infection by serviette. To meet the difficulty which ensued when I had to admit that the paper napkin and the uninclosed linen serviette were unsatisfactory I devised a serviette cylinder made of solid celluloid with smooth surfaces which is easily cleansed and which entirely envelopes the napkin, thus



protecting it from all contact with others. These cylinders are not unattractive in appearance and they are so much appreciated by patients that many ask to be allowed to take one away when leaving the sanatorium. It would be a decided advantage to visitors at boarding houses, where, unfortunately, so many tuberculous patients are wont to congregate, were some such arrangement adopted to prevent infection by means of tuberculous table napkins, and in families where some member is phthisical the use of the cylinder would be equally advantageous. At my suggestion Messrs. Allen and Hanbury have made a supply of serviette cylinders an illustration of which is reproduced here. They are quite inexpensive.

CHARLES E. REINHARDT, M.D. Brux., L.S.A. Lond., &c.
Chelsea, S.W.

A NEW FORM OF FINSEN LAMP.

THIS lamp is designed to meet the demand for a very small lamp, automatic in its action, burning iron or carbon electrodes, and working direct from the electric supply main. These conditions are fulfilled by making the shell of the lamp a water jacket of very small proportions, mounted on a frame which permits motion in all directions and at the same time is rigid when in working position. It is imperative that the diseased area to which the lamp is applied should be rendered anæmic, so that the rays can penetrate

the tissues, mere application of the lamp being futile unless sufficient pressure be exercised to produce this effect. For this purpose I obtained the chair upon which the patient is seated from Berlin and had the lamp

The lamp at work.

attached to it by means of a powerful bracket, steady pressure of the lens against the patient being maintained by a rack-and-pinion adjustment and counter pressure by the head-rest. From 15 to 20 minutes are sufficient to produce a good reaction. It is noiseless. On the score of economy this lamp is a distinct advance on all modifications of Finsen's apparatus. The current is two amperes at a pressure of 40 volts across the arc. The rubber water-tube connexions have been removed so as not to obscure the lamp. I am indebted to Messrs. John Hunter and Co. of Liverpool for their skill in carrying out my suggestions. The illustration shows the lamp applied under the chin. This is one of the most difficult positions to reach, but it can be easily treated with this lamp.

Liverpool. G. G. STOPFORD TAYLOR, M.D. Durh.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

A GENERAL meeting of the Medico-Pyschological Association of Great Britain and Ireland took place at the County Asylum at Mickleover, near Derby, on Feb. 12th. There was a large attendance of members from all parts of the United Kingdom.

The proceedings commenced in the forenoon with meetings of the council and various committees. At 1.30 P.M. Dr. R. J. Legge, medical superintendent of Mickleover Asylum, entertained the company at luncheon. Replying to the toast of his health, which was proposed by Dr. J. WIGLESWORTH, Dr. LEGGE said that he was greatly obliged to the visiting committee for the readiness with which it had consented to the meeting of the association being held at Mickleover Asylum. Colonel GASCOIGNE, the chairman of the asylum committee, whose health was proposed by Dr. T. OUTTERSON WOOD, said that his committee regarded it not only as a pleasure but as a duty to give every assistance in its power to an association the objects of which were so beneficent as its were.

The general meeting commenced at 3 P.M. under the presidency of Dr. WIGLESWORTH, medical superintendent of the county asylum at Rainhill, Liverpool. The first business was the election of ten new members.

The PRESIDENT then said that there was a motion on the agenda paper in the name of Mr. F. J. Stuart concerning the work of the tuberculosis committee of the association. It would be within the recollection of all present, he remarked, that that committee presented a report which was adopted, but the accuracy of the statistics which it contained was afterwards challenged and the secretary of the committee thereupon wrote to the *British Medical Journal* accepting personal responsibility for them. This, the President thought, was unfortunate, because every member of that committee was equally responsible for what the report contained. The council had gone fully into the matter at its meeting that morning; the facts were being examined by an expert whose report, when it appeared, would be presented to the association and all the circumstances would be considered very fully.

Mr. STUART then moved:—

That a committee be appointed to reconsider and to report on the statistics obtained by the late tuberculosis committee of this association.

He proceeded to criticise the statistics, asserting that they exemplified every fault both of omission and of commission that the mind of the most ingenious statistician could devise.

Dr. A. S. L. NEWINGTON moved as an amendment that the matter should be for the present left in the hands of the committee.

Dr. DAVID YELLOWLEES, in seconding the amendment, acknowledged that they were indebted to Mr. Stuart for pointing out the errors contained in the report and he believed that the chairman of the committee deplored the errors as much as anyone.

After some further discussion the amendment was carried by a large majority.

Dr. W. LLOYD ANDRIEZEN then delivered an address on the Stereoplasm of the Nerve Elements, a Study in Nerve Dynamics. The address was illustrated by lantern views.

Dr. ERNEST W. WHITE next read a paper entitled "Lunacy and Law: the Care and Treatment of Persons of Unsound Mind in Private Houses and Nursing Homes," which was published in THE LANCET of Feb. 14th, p. 427.

Dr. OUTTERSON WOOD then read a paper on Lunacy and the Law which we hope to publish on a future occasion.

At the conclusion of the reading of the papers the PRESIDENT said that in the limited period at their disposal it would be impossible to have a discussion which would do justice to the subjects.

It was then moved by Dr. OUTTERSON WOOD, seconded, and resolved that the discussion of the papers should be adjourned until the next meeting.

In the evening the members dined together at the Midland Hotel at Derby. The toast of "The Visitors" was replied to by Colonel GASCOIGNE, Dr. C. A. GREAVES, and Dr. E. VAUDREY. The health of the President was proposed by Dr. YELLOWLEES.

BRITISH ELECTRO-THERAPEUTIC SOCIETY.—The annual meeting of this society was held on Jan. 23rd, Dr. W. S. Hedley, the President, being in the chair.—Mr. Edmund Owen was unanimously elected an honorary member.—Dr. Hedley then delivered his Presidential Address on Medical Electrology and Radiology in 1902 and also showed a double high-frequency installation.—The following members were duly elected officers for 1903:—President: Dr. H. Lewis Jones (London). Vice-Presidents: Mr. W. F. Brook (Swansea) and Dr. Donald Baynes (London). Council: Mr. W. Armstrong (Buxton), Dr. J. Allan (Chislehurst), Dr. David Arthur (London), Dr. G. B. Batten (London), Dr. James Barr (Liverpool), Dr. J. A. Codd (Wolverhampton), Dr. S. Sloan (Glasgow), Dr. George Herschell (London), Mr. C. R. C. Lyster (London), Dr. E. R. Morton (Taunton), Dr. R. Milne Murray (Edinburgh), Dr. S. P. Sunderland (London), Mr. E. W. H. Shenton (London), Dr. E. Solly (Harrogate), and Dr. Hugh Walsham (London). Treasurer: Dr. H. W. McClure (London). Honorary Secretaries: Mr. Chisholm Williams (London) and Mr. J. F. Hall-Edwards (Birmingham).

THE LANCET.

LONDON: SATURDAY, FEBRUARY 21, 1903.

The Hunterian Oration of the Royal College of Surgeons of England.

THE Biennial Hunterian Oration was delivered on Feb. 14th by Sir HENRY G. HOWSE, the President of the Royal College of Surgeons of England, in the theatre of the College. This oration was founded in 1813 by Dr. BAILLIE, JOHN HUNTER'S nephew, and Sir EVERARD HOME, his brother-in-law, and was intended to perpetuate the memory of JOHN HUNTER by the delivery on Feb. 14th in every second year of an oration dealing with his work and the labours of others in the field of natural science and its relation to the healing art. Feb. 14th (St. Valentine's Day) was chosen for the occasion because HUNTER celebrated that day as his birthday,—though the register of the parish where he was born gives Feb. 13th as the day of his birth. With such great latitude in the choice of a subject many Hunterian orators have very variously interpreted their functions and as a result the orations have varied greatly. This year Sir HENRY HOWSE spoke chiefly of HUNTER'S life and work with which many of our readers may be familiar, but his career offers such an excellent example of brilliant genius supported by indomitable industry that it will bear recurring recital.

JOHN HUNTER was the youngest child of a small Lanarkshire farmer, and as his father died when the boy was only ten years old he was allowed to run wild and his education was grievously neglected. To this absence of parental control the orator attributed much of the passionate nature which HUNTER displayed in his later life. There is probably some truth in this view, but there is another aspect also from which we may regard the free, open, and unconventional life led by the boy till his twentieth year. It is certain that while he ran wild on the farm he was acquiring that love of the study of the ways of beasts and birds which was so strikingly manifested later; he was gaining the habit of close and accurate observation of nature which is seldom learnt or fostered within the four walls of a school. When about 20 years old he came to London and was allowed to assist his brother WILLIAM HUNTER; his talent for dissection soon showed itself and his progress was rapid. He might have become a dry-as dust professor but circumstances again conspired to broaden his views, to vary his experiences, and to render his work unconventional and progressive. He was appointed to the Belleisle expedition as an army surgeon and served also in Portugal, and in this way obtained opportunities for many new observations. After his return to London his original bent had full opportunity to display itself. His powers of investigation were exceedingly great; his mind, well stored with facts, was quick to perceive unexpected relations between facts, while theories were ever ready to spring up to explain the correlation between two phenomena, for he had an enormous range of accurate knowledge upon which to frame them. As a collector he was remarkable. Though he was primarily an anatomist and a surgeon he collected not merely anatomical and pathological specimens, but also those illustrating zoology, botany, geology, and mineralogy. He was willing to enlist the aid of his friends in his observations, but in investigations thus undertaken by different observers it is not surprising that differences of opinion as to priority in discovery should arise and of such disputes he had more than most men. He quarrelled at one time or another with many of those with whom he had to do and even with his brother WILLIAM. Both the HUNTERS were keen controversialists and neither could brook contradiction. WILLIAM HUNTER is said to have explained this by saying that all anatomists were impatient of contradiction because they were accustomed to the passive submission of the dead body.

We hear much of HUNTER'S lack of skill in teaching; we are told by Sir HENRY HOWSE, and others have said the same, that his style was involved and that his phrases were obscure. His books, indeed, do not excel in clearness of diction, but the lucidity of his writings must not be the test of his power of teaching. By his fruits must a teacher be known. Men do not gather grapes of thorns, nor can successful pupils result from bad teaching. It may with confidence be affirmed that rarely, if ever, have so many brilliant men been the pupils of one surgeon. The majority of the great surgeons in London for some years after his death had been the pupils of JOHN HUNTER. ABERNETHY, ASTLEY COOPER, CARLISLE, LYNN, EVERARD HOME, and BLIZARD may be mentioned as examples. On the substance of lectures rather than on the presence of flowery periods depends their success and if the hearers learn what the lecturer would teach them the exact words employed are only a matter of secondary importance. And what HUNTER'S pupils learned may be summed up by saying that he laid a foundation of physiology as the basis of pathology and so furnished a true guide to treatment. Modern surgery dates from JOHN HUNTER. The importance of his museum was recognised by HUNTER; to it he devoted many years and much money, almost exhausting his pecuniary resources. In his will he left directions that the museum should be offered for sale to the Government. The British Government can never be accused of over-estimating the claims of science on the national purse—and this is equally true of both political parties; but occasionally it happens that it does support a valuable project, and after years of hesitation the Government purchased the museum. No small credit, too, is due to the then Corporation of Surgeons, the Royal College of Surgeons of England, consenting to undertake the custody of this invaluable collection.

The founders of the Hunterian Oration recognised that mental food was not the only nutriment needed by man. So when they founded the Oration they founded at the same time a biennial Hunterian Dinner to which the President of the Royal College of Surgeons of England invites eminent members of the medical and other professions. At the dinner which followed the late oration Earl ROBERTS

had conferred on him the Honorary Fellowship of the College to which he was elected two years ago. Lord ROBERTS, as will be seen by our report of his speech in another column, took the opportunity of bearing eloquent testimony to the work in South Africa of the Army Medical Service and its many and distinguished civilian coadjutors. We are grateful to the Commander-in-Chief for recalling that work to the public mind, and we would beg him to believe that in the Royal Army Medical Corps the country has a body of men who, if they receive fair and sensible treatment and proper opportunities for keeping abreast with scientific developments, can become some of the most valuable public servants possessed by the Empire. We are proud to welcome Lord ROBERTS as a titular member of our profession.

The Etiology of Cancer.

IN THE LANCET of Dec. 6th, 1902, p. 1558, we published a leading article which drew attention to the arguments in favour of the contagiousness of cancer and pointed out the desirability of taking all possible precautions to prevent the spread of the disease. We have received a copy of a presidential address which Mr. W. GIFFORD NASH delivered at the annual meeting of the South Midland Branch of the British Medical Association in June of last year; in this address Mr. NASH discussed the whole question of the causation of cancer. Much of the evidence brought forward was quoted in the article to which we have referred, but there were several new facts of interest and importance. A striking case of auto-infection which he observed is the following. Mr. NASH performed an abdominal hysterectomy for malignant disease of the uterus and at the time of the operation the vagina appeared to be healthy, but two months later numerous secondary nodules appeared in the mucous membrane where sutures had been inserted to close the upper opening of the vagina. He quotes some instructive observations of Dr. BEHLA. The town of Luckau in Germany consists of a central portion with 3000 inhabitants, and eastern and western suburbs called Kalau and Sando, each of the suburbs having a population of 1000, thus making 5000 in all. From 1875 to 1893 no cases of cancer occurred in the western suburb, Sando; in the main portion of the town cases were not infrequent, while in the eastern suburb, Kalau, 73 deaths from cancer occurred out of a total of 663 deaths. The soil of Kalau and of the main portion of the town was flat, low, and moist; that of Sando was elevated, sandy, and dry. A stream or ditch encircled the main part of the town and the suburb Kalau, and it appeared that the cases of cancer followed the course of the ditch, and in Kalau, the suburb where cancer was very prevalent, all the gardens were watered from this ditch. The data are insufficient for the expression of any certain opinion, but there is great probability in the view that the semi-stagnant stream was somehow causally connected with the great frequency of cancer in the suburb of Kalau. The portion of Mr. NASH'S address which was of special interest dealt with some investigations which he had made as to the distribution of cancer in Northern Bedfordshire. The total population of the district was a little over 100,000 and so afforded ample material for statistics of value. The period investigated comprised the ten years 1890 to 1899. With regard to the alleged increase in cancer in recent years Mr. NASH thinks that the increase is apparent rather than real, and he bases this opinion on the fact that the earlier death certificates were frequently very inexact. For instance, many deaths were attributed to "natural causes," "senile decay," and "consumption." Now it is not unreasonable to think that many of the cases of "consumption" in old people were cases of cancer. Be this as it may, good cause is shown for thinking that some of the apparent increase in cancer is due to error. Some very strong evidence in favour of the infectivity of cancer is supplied by facts collected by Mr. NASH. "Duplicate cases" are instances of cancer occurring in two or more patients in a house, or in near relatives who are in the habit of visiting one another, or in a person who has been nursing or waiting on a patient suffering from cancer. 872 cases of death from cancer were investigated by Mr. NASH and he found 30 houses in each of which two or more cases of cancer had occurred. A good instance was seen in the village of Tingrith in the practice of Dr. J. WAUGH. A man, T. G., died from cancer of the lip in 1894. He was waited on by S. D. who died in 1897 from cancer of the ovaries. T. G.'s wife died from cancer of the stomach in June, 1899. These were the only cases of cancer which occurred in that village during the ten years. In another important series, W. C., aged 71 years, died from cancer at Campton in 1876. His wife had cancer of the breast for eight or nine years and died in another house in 1886. M. S., aged 74 years, nursed Mrs. C. and died in an adjacent house from cancer of the liver in 1893. Mrs. B., aged 73 years, occupied the same cottage as Mrs. C. after her death, and died from cancer of the umbilicus in 1892, and her daughter, aged 43 years, who slept in the same bed with her, died from cancer of the breast in 1896. From observations as to the altitude of the various villages in the district Mr. NASH finds that there are more cases at heights above 300 feet than below 150 feet. These results are important, as they do not accord with other observations. He considers that the nature of the soil has very little influence on the occurrence of cancer but that the large number of instances where two or more cases occur in the same house or in persons intimately associated points to the disease being infectious. He urges that all the clothes and bedding used by a patient suffering from cancer should be destroyed and that care should be taken to disinfect thoroughly the room which the patient has inhabited.

Lunacy Law and Practice in Regard to Private Patients.

THE address given at the meeting of the Medico-Psychological Association in November last by Sir WILLIAM GOWERS, upon Lunacy and the Law,[1] has served to bring out important papers presenting other points for consideration. These papers were read at the last meeting of the Medico-Psychological Association of Great Britain and Ireland held at the County Asylum at Mickleover, near Derby, on Feb. 12th, and one of them by Dr. ERNEST W. WHITE was published in THE LANCET of Feb. 14th, p. 427.

[1] THE LANCET, Nov. 22nd, 1902, p. 1369.

A number of important questions were raised at this meeting and many valuable facts were reported which ought to affect the attitude of the medical profession and of legislators alike towards this important matter.

The question of the single care of persons of unsound mind is fraught with many difficulties. The forms of certification and the order for admission of a patient into the single charge of a responsible person are identical with those for admission of a private patient to an asylum or registered hospital with the exception that the medical attendant in the former case takes the place of the medical officer of the asylum. The patient is visited at stated intervals and reports have to be made by the medical attendant to the Commissioners in Lunacy who periodically visit the patient. Thus abuses are guarded against and efficient official supervision is maintained. There are undoubted advantages in the certified single care of private patients of unsound mind. First, there is the privacy which the rich as well as the poor desire alike, while facilities are given for the visits of friends. Secondly, there is the possibility of placing the patient in bright and home-like surroundings. Thirdly, there is the avoidance of the "stigma" of treatment in a lunatic asylum. The defects and disadvantages of the treatment of lunatics as individual charges are few and remediable. The chief of these may be the absence of special medical treatment, since the medical attendant who visits the patient is, as a rule, a general practitioner or a physician with no particular experience in the treatment of mental diseases. But the general health of the patient may gain by the attendance of a practitioner who is not a specialist. Unskilled nursing is another drawback, as the nurse (male or female) placed in charge of the solitary patient in the private house may be devoid of asylum training and experience. The undue interference of friends or relatives is a source of trouble which is well-known to retard recovery and which can hardly be avoided except in asylums. But whatever may be the drawbacks met with in the system of certified single care they are remediable in many cases. This cannot be said of uncertified single care—the illicit and clandestine treatment of insane patients without certification. Being carried out secretly, without the cognisance and supervision of the Commissioners or Visitors in Lunacy, this system lends itself to abuses and dangers. Dr. WHITE and Dr. OUTTERSON WOOD both cited in the papers read to the Medico-Psychological Association cases of abuse and even of barbarism in the treatment of patients under the system of uncertified single care. A joint committee of the Medico-Psychological Association and of the British Medical Association, which waited on the Lord Chancellor in 1899, gave information that numerous cases of insanity, including many so-called "borderland cases," were clandestinely treated in the country and in the Channel Isles to avoid certification, and showed that many cases of inhumane treatment had been found to exist owing to this, with the result that the chances of recovery for the patient were imperilled thereby. As a consequence the Lord Chancellor introduced into the Lunacy Bill of 1900 a clause adapted from the existing Act in the Scottish lunacy law, of which the first section was as follows: "If a medical practitioner certifies that a person is suffering from mental disease but that the disease is not confirmed, and that it is expedient with a view to his recovery that he be placed under the care of a person whose name and address are stated in the certificate, for a period therein stated not exceeding six months, then during that period the provisions of Section 315 of the principal Act shall not apply." The rest of the clause made provision for the notification of the fact to the Commissioners in Lunacy who could thus visit the patient, while, on the other hand, the publicity of inquiry and the need of making a reception order by a magistrate were obviated. The patient had all the advantages of single care and incurred no "stigma" of publicity or of admission to an asylum. Incipient and unconfirmed cases of insanity could thus be placed and treated under conditions favourable to the patient, agreeable to the relatives, and consistent with the law of the land.

Similar advantages might be extended to patients suffering from insanity or mental unsoundness of a degree not demanding detention and treatment in an asylum or other institution. Certain cases of acute and sub-acute alcoholic insanity, many types of borderland insanity, and those cases of insanity which depends upon definite and severe stress and which tends to pass away as the exciting cause disappears, constitute the class of cases suitable for care and treatment without certification and the publicity of a magistrate's order. Notification to the Commissioners, as in the class of cases of incipient and unconfirmed insanity, would be sufficient to bring these cases under official cognisance and supervision and would thus prevent illegal and inhumane abuses, and a clause to this end could be introduced into the forthcoming Lunacy Bill. The modification suggested by the Medico-Psychological Association in this matter is that in all cases of mental unsoundness in which certification and compulsory detention seem needless, and in borderland cases, there should be a system of notification to the Commissioners in Lunacy to the effect that "A. B. is a person of unsound mind and is *not* a proper person to be detained." Such notification would be followed by a visit of a Commissioner in Lunacy or by someone deputed by the Commissioners. If a clause could be inserted into the forthcoming Lunacy Bill to give effect to this scheme another step would be taken in promoting rational and humane treatment and in diminishing the abuses of the law which are still prevalent in connexion with the clandestine treatment of the insane.

Annotations.

"Ne quid nimis."

THE ROYAL LONDON OPHTHALMIC HOSPITAL.

THE question of pulling down hospital buildings upon valuable sites that they may be rebuilt on other and less valuable sites has of late received a great deal of attention, the attention not always being supported by accurate knowledge. Consequently when it was announced that the reasons which caused the committee of the Royal London Ophthalmic Hospital, known all over the world as the Moorfields Eye Hospital, to sell the site in the City and to rebuild elsewhere would be publicly discussed considerable

interest was felt by the medical profession. On Monday last, Feb. 16th, the Lord Mayor opened 30 more beds at the new building of this institution in the City-road and occasion was taken to make a statement upon circumstances of very great medical and public concern. With regard to the general question of the removal of hospitals from old sites to new ones but little was said, which in itself showed that the speakers knew what they were talking about, for the wisdom or folly of removing hospitals must be judged on the individual merits of each case. There can be no general principle. With regard to the removal of the old Moorfields Hospital to its present site it can be pointed out against the policy which has been adopted that a big hospital unable to open its beds because of its heavy rates is, as far as the public is concerned, not so satisfactory an institution as a small but efficient hospital having all its beds occupied. This is true, but in the case of Moorfields the hospital is said to have been quite unsuitable to the growing demands which were made upon it, and moreover it was intimated to the authorities by King Edward's (then the Prince of Wales's) Hospital Fund for London that a grant was given to the hospital only by reason of the fact that it was being removed to a new site. That the management of the hospital has been everything that could be desired is shown by the fact that the last annual grant of the Fund was £1100, with a special donation of £2500 towards the 30 beds which the Lord Mayor of London has now formally declared open. In discussing the reasons which actuated the committee of management to remove to a new site the vice-chairman of the committee, Mr. H. Davison, admitted that the hospital had been removed from a site where they had lived almost rent free, and where they were subject to only a nominal amount for rates, to a new site where with a much larger building heavier expenses and rates were incurred. He pointed out, however, that though the committee was prepared for increased expenditure it did not expect that the rating authorities would treat the hospital on a different basis from that of similar institutions in the same district. The rates paid by the Royal Ophthalmic Hospital were heavier than those paid by any hospital in London except St. Thomas's Hospital and Guy's Hospital. The old hospital was totally inadequate to deal with the increasing number of cases requiring relief, it was not in accordance with the requirements of modern surgery, and it was also insanitary. Moreover, the old site did not cover a sufficient area for the erection of a new and adequate building. Whatever might be said of its policy in removing, he claimed that no one could say that the committee had not acted in a businesslike way: the last bill for the rebuilding had been paid and there was a credit balance of £600. The Lord Mayor, in reply to a vote of thanks, said with regard to the rating of hospitals that the time was coming, and coming very soon, when the question of some aid to the hospitals from the rates would have to be considered. If the authorities would not exempt hospitals from taxation but insisted upon exacting from them every farthing they possibly could the question would have to be considered whether the local authorities should not be made to contribute to these institutions. Our readers know that we are not in favour of rate-supported hospitals for several obvious reasons, the first and principal of which is that the rating authorities would not be able to obtain medical service comparable to that which is now given gratuitously to our noble medical charities. But although we do not desire to see our hospitals supported out of the rates and therefore placed under the jurisdiction of the rating authorities we certainly consider that the debt of the community to the charities should be acknowledged by some remission of the rates upon hospitals and similar institutions. The question is a very large one and, as the Lord Mayor said, is one that calls for immediate consideration. We hope that he will assist to keep it before the public eye.

SESSIONAL MEETING OF THE SANITARY INSTITUTE.

IT was suggested at the congress of the Sanitary Institute in Manchester last September that occasional meetings should be held in large centres of population for the discussion of questions relating to sanitation. The first of these meetings was held in Manchester on Feb. 7th at the Municipal School of Technology, under the presidency of Mr. A. Wynter Blyth, chairman of the council of the institute. There was a good attendance. Dr. Meredith Young, medical officer of health of Stockport, opened a discussion on the Removal and Isolation of Infective Patients in Populous Districts. With regard to such diseases as small-pox and typhus fever there was no question as to the usefulness of segregation. Scarlet fever was a disease requiring "peculiar delicacy and care in the matter of isolation." Referring to Dr. C. K. Millard's recent writings on the subject and to the untoward occurrence of "return" cases, he said that his indictment might now be looked upon as an attack, not so much upon hospital isolation *per se*, as upon isolation hospital administration, and he believed that when care was bestowed on the lines laid down by Dr. J. Niven and Dr. W. J. R. Simpson the benefits ensuing on the isolation of other infectious diseases would manifest themselves in connexion with scarlet fever. He urged that all investigations as to hospital isolation and its effects on the occurrence of complications and on mortality should be carried out on similar lines, so that a greater accumulation of facts and figures might be available. He submitted, therefore, that lines of inquiry and suggestions as to the mode of investigations should be drawn up by a sub-committee of the Sanitary Institute, and sent out to all medical officers of health willing to carry out an investigation. He advocated a more extensive course of instruction for medical students in infectious diseases and asked if it were not almost a scandal that a training of only a few weeks' duration should be given in a branch of knowledge on the possession of which the safety of large populations frequently hung. He spoke with no uncertain voice as to the measures for the repression of small-pox. If asked "to choose one, and one only, he would unhesitatingly throw to the winds notification, isolation, disinfection, quarantine, 'Leicester' system, or any other system, and pin his faith wholly and solely to universal vaccination." In these days of vacillation and timidity as to vaccination, of yielding to the tyranny of the minority, to which we owe the present widespread epidemic of small-pox, with its many deaths, the trouble and distress that accompany it, and the expenditure on account of it going on all over the country—which in the aggregate must be enormous—it is refreshing to have a definite statement from one whose position and experience lend weight to his opinion. Mr. T. W. H. Garstang, medical officer of health of Bucklow, said he was satisfied that in country districts hospital isolation reduced the prevalence of scarlet fever and that hospital nursing was infinitely preferable for any individual patient to the casual home treatment in the houses of the working classes. Mr. E. Sergeant, medical officer of health under the Lancashire County Council, agreed as to the advantages of isolation in scarlet fever and said that there should be the same medical supervision over the admissions as over the discharges, for he had known of cases admitted where the patients were not suffering from scarlet fever at all. He attributed the spread of small-pox largely to the vagrants who went about the country. "These tramps, these parasites, who were a nuisance to society, were allowed to go

about and spread disease," and he thought there should be power to enforce vaccination or revaccination among them unless they had a certificate of recent vaccination. If they would not submit they might be incarcerated until they had a proper mind on the subject. Mr. F. Vacher, medical officer of health of the Cheshire County Council, thought that not only hawkers but all tramps should be licensed, an expedient somewhat difficult to carry out. Dr. J. B. Wilkinson, medical officer of health of Oldham, illustrating the value of isolation, said that the stamping-out of typhus fever would have been impossible if the cases had had to be treated in the slum dwellings where they most frequently occurred. In his opinion the majority of the "return" cases of scarlet fever were due, not to premature discharge from hospital, "but to the absence of proper precautions and thorough disinfection of all clothing at the patient's house." It is well to bear this in mind when considering the length of time that clothing is known to retain infection. Several lay members took part in the discussion. One gentleman thought that to make all tramps carry a licence would be considered too great an interference with the liberty of the subject and no doubt many may be found to hold that the subject ought to be allowed to be a nuisance and a danger to his fellow subjects. Alderman McDougall said that the tramp question caused great concern to members of sanitary authorities and he was glad to know it was engaging the attention of so many capable minds. Mr. Wynter Blyth promised that Dr. Young's suggestion that a sub-committee might draw up lines as to the investigation respecting scarlet fever would be considered by the institute.

THE FREEZING POINT OF MILK.

IN a recent paper read before the Medical Society of Bologna and reported in *Il Policlinico* of Jan. 31st Dr. Giuseppe Bellei discussed the application of cryoscopy in the analysis of milk. The freezing point of milk, he said, has been determined by many observers who have for the most part obtained concordant results; as it varied within very narrow limits there was an obvious interest in discovering how far it would be affected by ordinary and recognised modifications of the quality and the composition of milk. The thermometer used for this purpose is divided into hundredths of 1° C. The apparatus has already been described and figured in THE LANCET by Dr. Alexander Ogston.[1] Dr. Bellei examined 50 samples of milk obtained from different cowkeepers in the vicinity of Bologna, determining in each case the freezing point, the specific gravity, the milk sugar, and the ash. He found that in the normal milk the freezing point varied from − 0·53° C. to −0·57°, the specific gravity varied from 1029 to 1033 without showing any relation to the freezing point, the milk sugar varied from 3·70 to 5·77 per cent., and the ash varied from 0·58 to 0·85 per cent. When the milk became sour the freezing point fell and continued to fall as the souring process progressed. Addition of water raised the freezing point; 10 per cent. of added water might raise it to − 0·51° and could be determined with certainty by means of cryoscopy. Simultaneous additions of water, starch, and dextrine produced no effect beyond that due to the admixture of water. The freezing point of scalded milk was lower than that of normal milk; the addition of water in quantity sufficient to bring the specific gravity to 1030 or 1032 gave a freezing point of from − 0·53° to − 0·55°, so that it was not possible to distinguish scalded milk by cryoscopy. The freezing point was not affected by the presence of small amounts of bicarbonate of sodium, salicylic acid, or boric acid, but it was lowered by the addition of two parts of formalin per 1000 of milk. Some further information relative to the behaviour of milk at temperatures near to its freezing point will be found in Mr. Henry Droop Richmond's "Dairy Chemistry."

[1] THE LANCET, Nov. 9th, 1901, p. 1253.

THE DISTRIBUTION OF PLAGUE.

DURING the week ending Feb. 1st 4 cases of, and 2 deaths from, plague occurred throughout all Egypt. Of the above cases 2 occurred at Barshoum-el-Koubra and 2 at Tant-el-Ghezireh, Toukh district, Galoubieh Province. For the week ending Feb. 8th 4 cases of plague occurred throughout all Egypt. Of these 3 cases occurred at Tant-El-Ghezireh and 1 at Barshoum-el-Koubra. As regards the Mauritius a telegram received at the Colonial Office on Feb. 13th states that for the week ending Feb. 12th there were 4 cases of bubonic plague and 1 death from the disease. As regards the Cape Colony, the medical officer of health for the colony states that for the week ending Jan. 24th no case of plague in any human being has been discovered at any place in the colony. At the end of the week one case of plague remained under treatment at the Plague Hospital, Port Elizabeth. Plague-infected rats have been found at Port Elizabeth during the week, the last being discovered on Jan. 18th.

THE ROYAL MEDICAL BENEVOLENT COLLEGE.

THE council of the Royal Medical Benevolent College is about to make a determined effort to put the finances of the charitable side of the institution on a sound basis. For some years the absence of a small reserve of cash upon which to draw has been greatly felt, in consequence of which year after year money has had to be borrowed from the bankers at interest. At the end of the year 1900 £2500 were owing, at the end of 1901 £400, and at the end of last year £2900. In order to pay off a portion of this loan, and to meet current pressing liabilities, a part of the small amount of funded property of the institution was recently sold; and, unfortunately, since then expensive structural repairs have had to be undertaken at the College which will make the task of managing the finances still more difficult. The foundation-stone of the institution was laid in July, 1853, and the scheme of the council is to raise a jubilee fund of £10,000 which would enable it to pay off the balance of the loan from the bankers, to meet all other liabilities, to re-purchase the stock which has recently been sold, and to put by a sum of money upon which to draw when, as will happen with all charitable institutions, a lean year occurs. The prospects of this jubilee special appeal are excellent, since H.R.H. the Prince of Wales has graciously consented, as has already been announced in these columns, to preside at the festival dinner on Wednesday, June 10th, in aid of the funds of the charity. We are confident that nothing would please His Royal Highness more than to know that, as a result of his decision to select this dinner for his presidency the finances of the charity had been placed on a sound footing and that the system of practically living from hand to mouth had disappeared for many years to come. Medical men, for whose benefit the institution exists, should, therefore, leave no stone unturned to make the dinner a financial success. £10,000 is a large sum to collect, but considering that there are 37,000 members of the medical profession the work ought easily to be accomplished. Almost all should give something, many ought to contribute liberally, and a few could give largely. Those who have wealthy patients might appropriately take this opportunity of enlisting their sympathy, since many persons realise that the payment of the medical attendant's bill rarely recompenses him for the anxiety and risk which he incurs. It behoves the profession to prove to His Royal Highness that his kindness in coming forward to help an important medical charity is fully appreciated. We are quite sure that whatever the treasurer, Dr.

C. Holman, and the officials can do to make this jubilee special appeal a success will be done, but their efforts will be of little avail if medical men fail to make a serious effort to help. A promised donation spread over a number of years will be almost as welcome as the money given down, and, needless to add, contributions of 5s. and 10s. will be gladly received. Most of our readers are doubtless aware of the work carried on by the institution. Pensions of £30 a year are given to 50 aged medical men or to the widows of those deceased and 50 foundation scholars, the sons of medical men in necessitous circumstances, receive free of charge an education of the highest class, with board and clothing. To maintain the benevolent side of the institution a sum of over £6000 a year is required, the greater part of which is derived from voluntary contributions. To obtain this sum every effort of the treasurer and the officials has to be employed, so that we trust soon to be able to congratulate them upon the placing of their finances upon a sound basis, at any rate, for some time to come.

WHAT IS BAD AIR?

IT would seem to be a reproach to chemical science that at the present time we are not able to ascertain by its application the exact nature of the vitiating constituent of the human breath. Certain it is that the chief constituent added to the air by respiration—namely, carbonic acid gas—*per se* has little or no effect upon the health. Indeed, it has been stated that men can breathe for two or three hours without marked discomfort air which contains—with, of course, its full complement of oxygen—as much as 20 per cent. of carbonic acid and the presence of 1 per cent. has not the slightest effect. But if the carbonic acid in the air be raised only to one-tenth per cent. by human respiration the resulting air is most unwholesome and detrimental. There is no chemical difference, of course, between the carbonic acid gas of the human breath and the carbonic acid gas obtained from chalk or from the combustion of carbon or coal gas. The obvious deduction is that the carbonic acid gas of respiration has a poisonous companion and this companion has so far eluded all attempts at isolation and recognition. This poisonous constituent may occur as a constant quantity in relation to the carbonic acid gas; possibly it does not. We do not know, although it is very important that this point should be determined. We are content, however, to judge the impurity of air by measuring the amount of carbonic acid in it and to some extent this measure is a valuable guide. It is not satisfactory that the evidence of impurity is not obtained more directly than this. Everyone knows that air vitiated by human respiration is offensive and poisonous. In other words, bad ventilation—that is, a condition in which the products of human respiration are not removed—sooner or later produces toxic symptoms. There are usually loss of appetite, discomfort, severe headache, and malaise which cannot be traced to infective organisms any more than the absence of such organisms can explain the curative effects of fresh air. Moreover, it is a common experience that a sojourn in a badly ventilated room occupied by a great number of people predisposes to disease. There seems little doubt that the impurity of the air has some connexion with the "catching of a cold." The presence of respiratory products is declared by an offensive smell and it seems odd that chemical analysis is not able to lay bare what actually the nose readily detects. The effect of bad air upon the health cannot simply be that of an offensive smell, though that undoubtedly plays a part. Quite recently chemical analysis and bacteriological analysis have at the instance of the London County Council been directed to the examination of the air of the tube railways. The results, as might be expected, showed a considerable increase of carbonic acid gas in the air of the "tube" over that found in the air above ground, while micro-organisms appeared to be present in "tube" air in only a slightly greater proportion than in fresh air, and certainly the result was no worse than is shown by the examination of the air of an ordinary inhabited room. In other words, the carbonic acid of the air of the tube railways and the bacteriological flora found offer no satisfactory explanation of the admitted fact that that air is decidedly unwholesome and offensive. It not only is absolutely devoid of the vitalising effect of fresh air, but it has also a most sickening smell and sooner or later gives rise to a sense of oppression. What is this poison? It seems to us that the whole question needs a much more extended inquiry than has been hitherto carried out, for surely chemistry and physiology hand in hand could eventually elucidate this matter. One point in regard to the smell of the air of the tube railways is, however, often forgotten—namely, that it is, in part at any rate, derived from the oil on the bearings of the engines and the machinery. We are certain that, however effectual the ventilation of the tube railways may ultimately become, the air will never be free from the smell of machinery in motion.

CALCULUS IMPACTED IN THE LOWER END OF THE URETER WITH ANEURYSM OF THE ABDOMINAL AORTA RUPTURED INTO THE PERI-RENAL CELLULAR TISSUE.

IN the *Intercolonial Journal of Australasia* for December Mr. W. Moore has recorded an extraordinary case in which two very rare conditions co-existed, rendering diagnosis impossible. A man, aged 44 years, was admitted to hospital on Oct. 20th complaining of pain in the abdomen and back which had confined him to bed for a week. Four days before admission he suffered much from vomiting. For three years he had suffered a good deal and for the last year had been almost continuously ill. Attacks of pain came on suddenly and generally were attended at the onset with vomiting. Sometimes he had a slight aching pain on micturition. He was wasted and sallow and his conjunctivæ were yellowish. The abdomen was full, especially above the umbilicus. The epigastric and right hypochondriac regions were slightly tender. With much misgiving Mr. Moore performed exploratory laparotomy on Oct. 27th, making an incision over the appendix which was found to be very long but not diseased and which was removed. This incision was closed and another one was made obliquely below the right ribs. The gall-bladder and ducts were explored and were found to be normal. A large cyst in the region of the right kidney was tapped and fluid looking and smelling like urine was drawn off. The incision was closed, leaving a gauze drain. After the operation a small quantity of albumin was found in the urine. On Nov. 3rd pus was found in the urine. On the 24th the right kidney was exposed by a lumbar incision. After dividing the aponeurosis and exposing the cellular tissue the finger was introduced and a sensation of something giving way was noticed. A little dark soft clot escaped and then there was such a gush of bright blood as to suggest that an aneurysm had been opened. The finger was kept in the opening and counter pressure was made on the abdomen, controlling the hæmorrhage. The wound was packed with iodoform gauze and sutured. When the wound was dressed on the next day the gauze plugs pulsated. There had been a little oozing of blood. On Nov. 29th the patient could not pass urine which subsequently had to be drawn off. On Dec. 3rd all the gauze

that would come away easily was removed and during the dressing there was no bleeding but three-quarters of an hour later there was severe hæmorrhage. Gauze packing was performed and two and a half pints of saline solution were injected into a vein. Death occurred four hours later. The necropsy showed a greatly dilated right ureter blocked at its vesical end by a calculus of about the size of a large bean. The kidney was converted into a sac containing purulent urine. The bladder contained purulent urine and showed signs of inflammation. There was an aneurysm of the abdominal aorta above the cœliac axis which had burst into the cellular tissue about the right kidney, forming a false sac, which was strengthened by a deposit of clot. The wound in the loin communicated with the sac, into which the gauze had been packed. The vertebræ were eroded. The accident during the lumbar operation was different from that in which an aneurysm is opened by mistake for an abscess. Here a condition of the kidney requiring operation was known to exist and the correct route was adopted. But on the way to the kidney was the false aneurysmal sac, the opening of which was unavoidable.

INTERNATIONAL CONGRESS OF THE MEDICAL PRESS.

THE Second International Congress of the Medical Press will open at Madrid on Monday, April 20th, under the personal presidency of the King of Spain. Dr. Cornil, President of the International Association of the Medical Press; M. Cortezo, chairman of the organising committee; Dr. Larra y Cerezo, secretary-general of the congress; and the Spanish Minister of Instruction are expected to take part in the opening ceremony. Among many interesting papers promised may be mentioned one on the Education of the Medical Journalist, by Dr. Rodrigues Mendez, the Rector of the University of Barcelona; and a History of the Spanish Medical Press, by Dr. Larra y Cerezo. Dr. R. Blondel, secretary-general of the International Association of the Medical Press, will make a communication upon the formation of an international bureau of scientific information and many important questions affecting the conduct and ethics of medical journalism are also set down for debate. Gentlemen desirous of attending the congress should communicate with Dr. Larra y Cerezo, 17, Léganitos, Madrid, concerning their subscription (25 pesetas, or 16*s.* 8*d.*), their lodging accommodation in Madrid, and reduced railway fares. The same gentleman should also be informed immediately by anyone who desires to read a paper at the congress. All questions regarding the International Association of the Medical Press should be addressed to Dr. R. Blondel, 8, Rue de Castellane, Paris.

AN EPIDEMIC OF INFANTILE PARALYSIS.

ONLY in recent years has the occurrence of infantile paralysis in epidemics been recognised. In the *Boston Medical and Surgical Journal* of Dec. 11th, 1902, Dr. Charles F. Painter has described an epidemic which occurred in 1900 in Gloucester, a seaport of Massachusetts with a population of 25,000. He gives notes of 31 cases which he examined in the months of June, July, and August, but some other cases also were observed by the local practitioners. Only one death occurred. There was paralysis of the leg. Three days later cerebral symptoms ensued and the child died in 36 hours from what seemed to be cerebro-spinal meningitis. Unfortunately, a necropsy could not be obtained. No definite cause for the epidemic could be traced, but the majority of the cases occurred at, or more frequently from 24 to 36 hours after, periods of extreme heat. Sometimes the symptoms followed bathing in the sea. The following statistics of the epidemic are of interest. There were 23 males to nine females. The youngest patient was of the age of 13 months and the oldest of 10 years; 21 patients were of the age of three years or younger, eight were of the age of two years or younger, and seven were of the age of four years or older. Dr. P. Marie cites foreign epidemics of infantile paralysis as proof of the infectious nature of the disease. The following are the principal epidemics reported. In the *American Journal of the Medical Sciences* in 1843 Colmer has described an "epidemic of teething paralysis." From eight to 10 cases occurred within a radius of three miles in three months. In 1881 Bergenholtz observed 13 cases in Umea, Sweden, in a period of six weeks. Onhohm, in Mendal, Norway, reported about the same time nine cases which occurred in six weeks in a small community. In 1885 Cordier reported 13 cases near Lyons which occurred in June and July. Calverly reported the greatest epidemic on record in the valley of the Otter river—126 cases with a mortality of 18. But some neurologists doubt the nature of the epidemic as the mortality was so high and there were symptoms suggestive of epidemic cerebro-spinal meningitis.

NATIONAL HEALTH AND PHYSICAL EDUCATION.

IN THE LANCET of Feb. 14th, p. 471, we published a letter under the above heading from Sir Lauder Brunton which commenced with a quotation from Burns. After we had gone to press we received another communication from Sir Lauder Brunton saying that he had doubts as to the accuracy of his quotation but that being away from his books he had no means of checking his reference. We have had neither the time nor the opportunity to collate all the editions of Burns but the passage is generally printed as follows:—

> "O wad some pow'r the giftie gie us,
> To see oursels as ithers see us."

Sir Lauder Brunton makes two additions to his letter which are as follows. The first is with reference to the passage quoted near the end of his former letter, from Mr. Francis Palmer's book, "Russian Life in Town and Country," and concerns the word "artel." The meaning of this word is, a small guild. Sir Lauder Brunton then goes on to say: "Since writing my former letter I have seen in the *Daily Telegraph* of Thursday, Feb. 5th, p. 9, under the title, 'Boy Smokers,' a still more staggering statement than Sir Frederick Maurice's. At a meeting of the British Anti-Tobacco and Anti-Narcotic League on Tuesday, Feb. 3rd, Dr. T. P. Smith said that out of 11,000 young men who volunteered for active service during the late war less than 1500 passed the test of medical examination."

THE CURABILITY OF TABES DORSALIS AND OTHER PARA-SYPHILITIC AFFECTIONS BY THE INTENSIVE MERCURIAL TREATMENT.

DR. LEREDDE of Paris, in a contribution to the *Philadelphia Medical Journal* of Jan. 10th, calls attention to this most important matter. The "intensive" mercurial treatment of tabes dorsalis and of general paralysis is one of the most recent developments in the treatment of cerebro-spinal diseases and an account has already been given in THE LANCET of some interesting results achieved in this respect by Dr. Lemoine in the treatment of general paralysis.[1] Dr. Leredde declares that after having successfully treated a case of tabes dorsalis by this method and investigated thoroughly several cases of general paralysis which have recovered or improved markedly under treatment he is now convinced that these diseases may be regarded as essentially curable. The unsuccessful cases, he points out, are due to incorrect treatment or to overlooking the presence of gross and irremediable organic lesions of the nervous

[1] THE LANCET, Sept. 6th, 1902, p. 690.

system. In the earlier stages of tabes dorsalis and of general paralysis when the symptoms are definite and the lesions have not involved actual destruction of nerve tissue—that is, when the morbid process consists mainly of vascular changes in the nervous system and of early nutritive degenerations of the nerve cells—the improvement obtained by cases under treatment which he cites has been so constant and enduring that he is confident in regarding them as cured. With Fournier of Paris Dr. Leredde regards nine-tenths of all cases of tabes dorsalis and of general paralysis as parasyphilitic affections and he cites the observations recently made by Professor Renaut on the morbid changes of the blood-vessels in the early stages of syphilis which are curable under mercurial treatment. Similar changes mark the onset of tabes and of general paralysis and thus an anatomical basis, he considers, is found for the curability of these affections also.

THE PREVALENCE OF SMALL-POX.

THE following circular letters were recently issued by the Local Government Board for Scotland to the border counties and burghs; it may be of importance to other local authorities to be made aware of the present danger:—

To the County Clerk.

SIR,—I am directed by the Board to request your serious attention to the rapid spread of small-pox in the northern counties of England and to the probability of the introduction of infection to Scotland through the agency of vagrants.

It is a matter of observation by English local authorities at the present time that the disease is being conveyed from point to point by tramps. I am, therefore, to suggest for the consideration of the local authorities of your county the expediency of addressing a general warning to this effect to the inspectors of poor and parochial medical officers of the parishes adjacent to the border, and also of communicating with chief constables with a view to securing the observation of such persons by the police. I am, Sir, your obedient servant,

(Signed) A. MURRAY,
for Secretary.

To the Town Clerk.

SIR,—I am directed by the Board to request your serious attention to the rapid spread of small-pox in the northern counties of England and to the probability of the introduction of infection to Scotland through the agency of vagrants

It is a matter of observation by English local authorities at the present time that the disease is being conveyed from point to point by tramps. I am, therefore, to suggest for the consideration of your local authority the expediency of bringing this fact to the knowledge of your inspector of common lodging-houses and of officials who have relations with the class in question, including the police, so that they may bear in mind the likelihood of encountering this disease.

I am, Sir, your obedient servant,

(Signed) A. MURRAY,
for Secretary.

A copy of the above circular letter was sent to the medical officer of health of each of the local authorities concerned.

THE EMBRYO-PATHOLOGY OF TUMOURS.

A PAPER on the cause of cancer and other tumours, with suggestions as to the line of research to be taken up for the discovery of a cure for cancer, was read before the Royal Society of Edinburgh on Feb. 16th by Dr. John Beard, lecturer on embryology and vertebrate zoology in the University of Edinburgh. He showed that tumours are referable (1) to abnormal attempts at development on the part of one or more vagrant or aberrant germ-cells, and (2) to the bizarre pathological manifestation by such of some greater or less portion of the life-cycle of normal animal development. He is altogether opposed to the hypothesis of "rests" of embryonic organs, according to which many pathologists, following Cohnheim, have attempted to explain the formation of tumours by a sudden awakening of such "rests" into activity. He maintains that germ-cells never arise at the first division of the fertilised egg and that there must always be a number of cleavage products not concerned in the formation either of an embryo or of germ-cells. These products give rise to an asexual foundation upon which the germ-cells, and with them an embryo, take their origin. In human development this foundation, the chorion, is always present before any trace of an embryo appears. It is never the task of the fertilised egg to give rise directly to an embryo, but rather to a set of germ-cells, each and every one of which may develop an embryo. If in the human subject two such germ-cells develop with abnormalities on the part of one there may result a more or less rudimentary embryo, or what has been called an embryoma by Professor Max Wilms—i.e., a tumour. It apparently never happens that all of the primary germ-cells find their way to the normal position for furnishing the foundation of the reproductive products. A portion of them come to lie in one or other of very many abnormal positions, so that hardly a single organ of the body is free from the risk of possible "infection" by such vagrant germ-cells which are endowed with great potentialities for mischief. Dr. Beard has already explained his views in an article published in THE LANCET of June 21st, 1902, p. 1758, and has there made the suggestion that if a vagrant germ-cell skips the part of the cycle immediately before it its normal development may lead to the pathological formation of the representative of a chorion possessed of unlimited powers of growth, a cancer. The continuation of his argument is somewhat as follows. In every normal development the chorion or syncytium commences to degenerate at a well-defined epoch, the so-called "critical period," and if it did not do so its further unrestricted growth would lead to a form of cancer—deciduoma malignum or chorion epithelioma. The degeneration of the chorion and with this the arrest of its growth are in all probability brought about by some substance either contained within the fœtal allantoic placenta or present in the blood of the fœtus, and just as the fœtal allantoic placenta or the fœtal blood can induce degeneration of the chorion, so it ought to be possible from allantoic placentæ or fœtal blood of animals such as the pig to prepare an extract or a serum with potent workings upon the cells of cancer.

CHARING CROSS HOSPITAL.

THE eighty-second annual report of the council of Charing Cross Hospital lies before us and from it we learn that the nurses' new home is practically complete whilst the rest of the new buildings are making good progress. The two notable events of the past year were the laying of the foundation stone of the new buildings with full masonic ceremony by the Grand Master of England, H.R.H. the Duke of Connaught, and the festival dinner at which the Duke of Fife presided. At this dinner the total sum collected was £5477 and we can cordially indorse the Duke of Fife's words in which he expressed the urgent need for new buildings and new arrangements for the hospital. Also it is certain that the hospital does admirable work and is obviously a boon to the neighbourhood in which it is situated. It has been said that the hospital should be moved. We do not think so, but the concluding sentences of the report of the council give cause for reflection. The council says that it "cannot but view the present financial situation of the hospital with considerable anxiety. The past year has been unfavourable for obtaining money. ..... The year 1903 begins with a deficit of £14,000. The amount required for the maintenance of the hospital and convalescent home is £17,000, of which £15,000 has to be raised from benevolent sources. In 1902 the extraordinary expenditure amounted to £33,000. It is not likely that a less sum will be required this year, making a total of £62,000." In the year 1900 we see by Burdett's "Hospitals and Charities" that the extraordinary expenditure amounted to £3573, so we take it that the addition of some £29,000 to the extraordinary expenditure is due to charges for sites and for building. We have no doubt that new accommodation and increased space are urgently required if the hospital is not to fall back in its good work, but we think that the authorities might well pause before, in

addition to commencing the year with a deficit of £14,000, incurring, as they apparently intend to incur, an extraordinary expenditure of over £30,000.

THE PROFESSOR OF ANATOMY IN THE UNIVERSITY OF EDINBURGH.

Professor D. J. Cunningham, F.R.S., late Professor of Anatomy in Trinity College, Dublin, has been appointed Professor of Anatomy in the University of Edinburgh in the room of Sir William Turner, now Principal of the University. Professor Cunningham's excellent practical and literary work are too well known to our readers to need any insistence upon from us, but it will be interesting to mention his obvious claims to his new post. Professor Cunningham, the youngest son of the Principal of St. Mary's College, St. Andrews, was educated at the University of Edinburgh, where after taking his medical degree he became demonstrator of anatomy under Sir William Turner for six years, afterwards being elected Professor of Anatomy at Dublin, a post which he has now held for 20 years. The Universities of Oxford, Cambridge, Edinburgh, and London, and the Victoria University, have all utilised his services as an examiner, while he has sat upon more than one Royal Commission. Professor Cunningham is one of those rare people, a thorough expert in his subject with wide knowledge outside it, and the loss to Trinity College, Dublin, is a heavy one.

EXPENSES FOR MAINTENANCE OF PAUPER LUNATICS IN ASYLUMS.

UNDER the provisions of the Lunacy Act, 1890, Poor-law guardians are required to pay a certain sum per head per week for the maintenance of their insane poor in the county asylums. The amount of this weekly sum is fixed by the visiting committee of the asylum and it is subject to a revision every six months. Changes are chiefly due to variations in the contract price of foods, clothing, and necessaries. It is customary for the committee to supply the guardians with statements of the amounts to be charged during the following half-year, but to the power of the committee there are limits. They are indicated in the sub-clauses of section 283 of the Act above mentioned. To understand these limits it must be remembered that lunatics in an asylum may be grouped in two classes—those who have a "settlement" in the county to which the asylum belongs and those who have settlements in other counties. For patients in the first named class the committee may fix the weekly cost per head at a sum not exceeding 14*s*., but sub-clause 2 gives power to the authority to whom the asylum belongs to increase the amount to any sum that "seems necessary" provided that the order for such increase be published in a local newspaper. For patients in the second class—namely, those who are in an asylum for a county in which they have not a settlement—the committee may fix, under the terms of sub-clause 3, a sum not exceeding 14*s*. It was to this second class that Eliza Whent belonged. She was a patient in the Essex county asylum, but she had a settlement in the Samford union, Suffolk. At the Brentwood county court an action was brought on Jan. 28th by the committee of the Essex county asylum against the guardians of the Samford union for recovery, for the maintenance of Eliza Whent, of a sum based on a weekly charge of £1 1*s*. The defendants declined to pay at a greater rate than that of 14*s*. per week, alleging that the committee could not legally charge, and that they, the defendants, could not legally pay, any sum in excess of 14*s*. for each week of maintenance. They contended that sub-clause 3 of section 283 of the Lunacy Act prevented the committee of the asylum from fixing a greater weekly sum than 14*s*. His Honour (Judge Tindal Atkinson) gave judgment in favour of the defendants and he also gave leave to the committee to appeal. His Honour held that the resolution of the committee fixing the weekly cost of maintenance of each "out-county" patient at £1 1*s*. was *ultra vires*. We think that this decision is an important one. Unless it be reversed upon appeal or unless sub-clause 3 of section 283 be modified in the lunacy legislation expected in the near future a very anomalous state of matters will continue. We shall see authorities of county asylums charging guardians of their own county for their own county patients any weekly sum which "seems necessary," while for patients who have settlements in other counties no greater charge than 14*s*. per head per week can legally be made. From consideration of the above case we gather that to the list of faulty, contradictory, and indefinite clauses in the Lunacy Act of 1890 one more must be added.

WE understand that the report of the departmental committee on poisons has been issued, in which it is suggested that certain alterations relating to the regulation of the sale of arsenic, tobacco extracts, and carbolic acid should be made. It is not surprising that a minority report is added, since the proposal to allow greater latitude in regard to the sale of poisons may be fraught with serious issues. We hope to deal with this important report next week.

Dr. J. S. Macdonald, professor of physiology at the University College, Sheffield, will lecture on "Nerve as a Concentration Cell" on Friday, Feb. 27th, at 5 P.M., in the Physiological Laboratory of the University of London. Professor C. S. Sherrington, Dr. E. H. Starling, Dr. A. D. Waller, and other physiologists are expected to join in the discussion of the subject.

THE annual meeting of the Coal Smoke Abatement Society will be held, by permission of the Duke of Westminster, at Grosvenor House, at 3 o'clock, on Tuesday afternoon, Feb. 24th. The Duke of Argyll, K.T., has consented to preside over the meeting and the speakers will include Lord Robert Cecil, K.C., Sir James Crichton Browne, and Mr. Shirley Murphy.

THE next meeting of the Epidemiological Society will take place at 11, Chandos-street, Cavendish-square, London, W., on Wednesday, Feb. 25th, at 8.30 P.M., when a discussion will be opened by Dr. Patrick Manson, C.M.G., F.R.S., on the Panama Canal and the Introduction of Yellow Fever into Asia.

A MEETING of the Neurological Society will be held on Thursday next, Feb. 26th, at 8 P.M., at 11, Chandos-street, Cavendish-square, London, W., and will be devoted to the exhibition and discussion of cases of Myopathic Muscular Atrophy.

THE medical department of the Local Government Board has issued a report of an investigation which has been in progress for some years as to lead poisoning by means of water.

WE regret to hear of the death of Mr. W. J. C. Miller, who was for over 20 years registrar of the General Medical Council.

CLIFTON DISPENSARY.—The ninetieth annual meeting of the subscribers to this institution was held on Feb. 3rd under the presidency of the Rev. Canon Wallace. The medical report stated that 3579 patients had been treated during 1902, including 73 midwifery cases, being an increase as compared with the preceding year. The financial statement showed that the total income amounted to £755, and a small favourable balance remained.

THE PRACTICE OF SUBSTITUTION IN THE SPIRIT TRADE.

NOWADAYS the art of substitution would appear to permeate every trade, and it is usually justified on the apparently philanthropic ground that it is all for the public good, although any reference to the effect that the substitute is invariably a much cheaper article than the original product is seldom made. For example, it is urged that jam can no longer be made with cane sugar because it crystallises and therefore a certain amount of glucose must be added in order to keep the preserve in a more or less fluid condition. Again, beer, we are told, can no longer be made from hops and all malt and so glucose must be introduced in order to prevent, it is asserted, a muddy product. Some, again, such is their taste, are said to prefer chicory to coffee, while others would have us believe that butter is inferior to margarine.

The latest controversy upon the subject of substitution has centred round whisky and a good deal has been said as to the merits and demerits of grain and malt whisky. It is significant perhaps that this discussion should have arisen almost immediately after the results of THE LANCET Special Analytical Commission on Brandy were published, in the report of which the addition of grain spirit to whisky was incidentally referred to, and several communications upon the question from distillers in this and other countries have lately reached us. Doubtless to a great section of the public the recent discussion has appeared to them to be something of the nature of a revelation. They will have realised that the trade done in so-called grain spirit is very considerable and that the destination of this spirit is largely whisky. They must admit, also, in the light of our own inquiries, that a similar expedient is adopted with regard to brandy, and the conclusion is irresistible that a very demoralised state of things has overtaken a large section of the spirit trade. We are told that this practice of substitution is the outcome of a public demand but it is more probable that its adoption introduced a much wider margin of profit than was possible before. Upon this point we may usefully quote the candid opinion expressed in an editorial article which appeared in connexion with this controversy in a leading journal of the spirit trade: "The fact is that there has been—and the sooner it is confessed and amended the better—a great deal too much misdescription and mendacity even in the trade. Look at the labels which respectable houses put on their whiskies, particularly their cheap ones. Foaming cataracts tumbling through rocks and mountains and 'fine Highland' boldly put upon stuff that has not a 'fifth' of even 'malt' to bless itself with, let alone 'Highland.' Then the plea that is put forward to palliate all this deception, 'The public prefer grain.' Well, suppose they do; who taught them to prefer grain by giving them plenty of it? Let those who have been making such huge profits all these years answer the question. ..... It is the conveying of false impressions to the consumer at other people's expense to which we object. For all this masquerading of whisky in plaids and kilts and sporrans is done at the expense of the Highland distiller." Nothing could be more straightforward than the opinions thus expressed and it is to be hoped that they will appeal to the honest sense of the industry which this journal represents.

The present position of the whisky business, according to this graphic description of its own representatives, is not without interest to our medical readers and it may be instructive to recapitulate the chief points of the controversy. It is contended, on the one hand, that grain spirit is necessarily an impure spirit—that is to say, is unwholesome—and that, on the other, an all-malt spirit duly matured is without prejudice to health. There can be no question that whisky originally was an all-malt spirit, grain spirit being a comparatively modern production. Grain spirit in fact is the product of a patent still which effects a much more rapid separation of alcohol than does the old pot still, not only from the weak liquor in which it is generated, but also from the by-products of fermentation. Chemically speaking, therefore, grain spirit is a purer alcohol than all-malt spirit because the latter contains volatile substances other than alcohol. It should be pointed out that the era of whisky began as soon as brandy fell into disrepute, which happened when the vineyards in the Charentes were ruined by disease in the late "seventies." Rightly or wrongly, the medical profession is generally credited with having brought whisky into favour by suggesting that well-diluted, honest whisky was more to be trusted as a pure and wholesome form of stimulant than the wines and brandies at that time, which were undoubtedly the subject of considerable sophistication. But it is very important to bear in mind that in recommending the use of whisky for a specific purpose medical men could have had no other spirit in view but that made entirely from malt and matured by storage, for at that time the addition of grain spirit was not practised. When whisky was ordered therefore an all-malt whisky was prescribed.

"In cases of profound nervous and cardiac exhaustion one does not want merely an action upon the heart, but that stimulating influence upon the brain and vital centres which the volatile bye-products seem to be alone capable of exerting. Pot-still whisky, rum, and genuine brandy possess these bye-products."[1] The substitution of grain spirit for an all-malt spirit or the blending of malt with a large proportion of grain spirit thus raises a question of some medical importance; the physiological merits and demerits of grain spirit and all-malt spirit respectively have, in short, to be considered. To begin with, the physiological effects of grain spirit must be referred practically to alcohol alone, since it contains little else. It is a pure spirit, without even *finesse*; it is flavourless or "silent," evidencing, that is to say, no clue to its origin. On the other hand, there is decided character in a malt spirit; it possesses a perfectly distinct flavour and a carefully conducted chemical analysis reveals certain products which are quite distinct from alcohol and to which its special characteristics as regards palatability, flavour, and bouquet may be ascribed. It is probable that these secondary or by-products of fermentation and distillation modify in some peculiar way the physiological action of alcohol. They are even said to expedite the maturing process, or it may be that the secondary products of pot-still whisky yield more readily to oxidising influences than does "silent" whisky. Certainly a young or raw malt whisky will create more physiological mischief than will raw grain spirit. But a well-matured all-malt spirit is for some reason or other more wholesome and less harmful than either. We are therefore led to suspect that there is a molecular rearrangement in the malt spirit containing secondary products by which the physiological action of the spirit is modified for good. In the same way young brandy is admittedly objectionable, while old brandy is acceptable, and yet the latter accumulates quite a high proportion of secondary products, such as aldehydes, ethers, and higher alcohols. It is conceivable again that these secondary products may concentrate to such an extent as to render the spirit excessively potent though it may still be agreeable and mellow to the taste. Very old sherry or brandy, or even beer, are physiologically very powerful, while the taste is singularly mellow. Again, what is described as "fat whisky" may have disagreeable effects in some individuals and on this account its dilution with a featureless spirit such as grain spirit is considered to be desirable in order to reduce the full-bodied character of the all-malt spirit. It does not follow, however, that an all-malt spirit cannot be delicate in character or cannot possess *finesse* without recourse to attenuation with a foreign spirit. Grain spirit, however, was introduced presumably to "break down" the "fulsomeness" of an all-malt spirit; in reality it proved to be a cheap way of increasing the volume of a true whisky without diminishing its alcoholic strength, whilst preserving some of its malty flavour. A similar practice prevails in regard to brandy, mixtures of a little genuine brandy with cheap grain spirit being very largely sold as the pure product.

Is the practice fraudulent? Is it likely to lead to injury to health? Of course, all alcohol from whatever source is, speaking generally, more or less injurious to health but, at any rate, the consumer has a right to have some guarantee as to the nature or origin of the alcohol that is supplied to him. Otherwise he might as well buy common rectified spirit as spend a good deal more on an article with a fanciful or, worse, a misleading description. However opinions may differ as to the relative wholesomeness of all-malt and grain spirit there can be no justification whatever for the substitution of the latter, or a mixture of the two, for the former. The fact of some

[1] Foods and the Principles of Dietetics, by Robert Hutchison, M.D., M.R.C.P.

people preferring margarine to butter or chicory to coffee gives no excuse to dealers to sell a mixture of the two as butter or coffee respectively. We are inclined to favour the view that a thoroughly matured all-malt spirit is, physiologically speaking, better than a grain spirit. Grain spirit can undergo but little change with age because there is nothing in it practically but alcohol, although, of course, there can be little doubt that when it is stored in sherry casks it may take up vinous principles and ethers may be gradually formed. One reason why the choice of a whisky may fall upon an all-malt spirit is that when grain spirit is added to swell the volume of the blend there is no protection against the use of a very physiologically bad spirit for the purpose and there is no guarantee that the diluent employed is free from reproach. Indeed, we suspect strongly that bad whiskies owe their origin to this practice. Bad whiskies are probably never all-malt whiskies.

What is the remedy? For one thing we should like to see it insisted that upon the label of the bottle of all spirits there shall be printed a clear statement of the nature of the contents whether the spirit be an all-malt whisky or partly malt and partly grain spirit, or an all-grape brandy or partly grape and partly grain spirit, and so forth. There can be no valid objection to the sale of mixtures so long as they are sold as such, but obviously it is fraudulent to sell a mixture when a pure unmixed spirit is expected or asked for. Again, it seems to us that it would not be adding very much to the duties of the Excise authorities if they were to undertake the control of this labeling and accurate description of spirits, for the Inland Revenue Department must know exactly the pedigree and history of all the spirit produced in the United Kingdom. We understand that certain distillers have approached the Inland Revenue Department upon this point, with the view of that department exercising a system of control by which the age and nature of spirits could be guaranteed to the public. In this connexion our attention has been drawn to a system of municipal control which has been adopted in Schiedam. In order to prevent the mixing of cheap spirit with "hollands" the municipality of Schiedam, in which town about 98 per cent. of the genuine hollands is made, has instituted special guarantee labels to be used on the bottles, cases, and casks of the distiller who makes and sells nothing but the genuine article and places his distilleries under the control of the municipality. The distiller who is desirous of enjoying the privilege of the system must allow the officials to inspect not only his different distilleries and refineries but also his Excise accounts as entered by the Government inspector concerning the spirit brought in or taken out of the premises. He further must keep a register of the labels which he has received from the municipal authorities showing how they have been used and this must correspond with the Excise documents. The effect of such a system, even although it has only been in operation for a short period, has been, it is stated, very satisfactory in spite of the opposition of certain exporters who were naturally averse to the innovation, since it was calculated to deprive them of the great profits which they made by mixing the genuine article with a very large proportion of cheap spirit.

All honest merchants and dealers in spirits in this country would, we are convinced, welcome the introduction of a similar system of control. In the light of recent revelations some such step is urgently needed; it would harass the dealers in cheap spirit of course, but it would be of unquestionable benefit to the community to have the assurance that the label on the bottle describes correctly its contents. In such a case the truth about the public taste would soon become evident.

MEDICINE AND THE LAW.

The Camberwell Murders.

EDGAR EDWARDS, or Edwin Owen, as his name was stated to be by the one witness called on his behalf at his trial, was on Feb. 13th sentenced to death by Mr. Justice Wright at the Old Bailey. He was convicted of murdering William John Darby, with his wife and child, upon evidence that allowed no shadow of doubt as to his guilt, although, to use a term of which the late Sir James Fitzjames Stephen strongly disapproved, it was entirely circumstantial, for no one ever saw the murderer in the company of any of his victims or had ever heard him express ill-will against them. The defence raised, so far as the thankless task of raising a defence was attempted by his counsel, was that of insanity. It was supported by no medical evidence, but a witness who said that he was the prisoner's uncle by marriage informed the court that the prisoner's mother's brother lived and died a lunatic, that the prisoner's maternal grandfather had a married sister who had been in a lunatic asylum, and that one of the witness's daughters—that is to say, a first cousin of the prisoner—was now under control. He added that the prisoner's father died a confirmed dipsomaniac, having squandered in drink the fortunes of himself, his wife, and his two sisters. This is the kind of family history which, if it had been so given that its truth could have been tested and relied upon, might well have paved the way for medical evidence of insanity in the prisoner himself had the defence been able to call any. It was, however, unsupported by any medical evidence and Dr. James Scott, medical officer at Brixton Prison, who had kept the accused under close observation, went into the witness-box and said that he had seen nothing to indicate mental derangement. The prisoner's counsel dwelt upon the smallness of the motive that prompted the crime, but smallness of motive is no new thing in murder cases. The prisoner apparently tried to support the suggestion of insanity by a demeanour which no doubt seemed to him appropriate and by the exhibition of callous insolence even when sentence was being pronounced upon him. Probably the learned judge was right when he said that there might be some unsoundness of mind to account in a measure for his acts. He is an able-bodied and apparently not unintelligent man who might have earned an honest livelihood, but instead has lived a life of crime and spent nearly 15 years of his life in prison. This fact was kept from the public until the trial was over. Such a life and such an act as the murder of the Darby family are not characteristic of normal moral instincts and inclinations; there is nothing, however, in them to indicate that the convict who has now reached the end of his career did not do all that he did with full knowledge of its wickedness, deliberately accepting the possible consequences, while he took all the steps in his power to avoid them.

Physical Infirmity as an Incentive to Almsgiving.

Beggars have probably made a living out of the exhibition of physical infirmities and deformities, real or simulated, ever since mendicancy has existed and others have increased their gains by taking with them children, because those who give without thought or inquiry have a vague idea that to give to the ostensible parent benefits the unfortunate child. It is to be hoped that some of these promiscuous almsgivers will have had brought to their notice the case of a man whom Mr. Justice Grantham has sentenced to a richly deserved term of ten years' penal servitude at Manchester Assizes. A little girl, six years of age, living with her mother at Manchester, had had the misfortune to lose a leg which had been amputated, and this condition of the child appears to have excited the cupidity of the prisoner, himself a one-armed man and no doubt accustomed to excite commiseration on that account, for he made some sort of offer for the child to the mother which was naturally refused. Failing to secure his victim in this way he deliberately kidnapped the little girl who had been left outside a shop in a perambulator by her parent, and he also eluded the police, to whom complaint was forthwith made. For three months he dragged the child round with him, making her go on crutches so as to secure the full measure of compassion that he desired and sleeping with her at common lodging-houses. His tour was presumably not unprofitable, for having exploited Scotland as far as Edinburgh he seems to have crossed to Ireland and to have gone, at any rate, to Dublin before returning to the North of England. At last, however, he attracted the attention of an officer of the National Society for the Prevention of Cruelty to Children, or of someone who had the good sense and humanity to inform that organisation, with the result that he was arrested and sentenced to three months' imprisonment for exposing the child to unnecessary suffering. His offence would have been cruel enough if the matter could have been allowed to rest there. It was discovered, however, after he had been committed to gaol that he had added to his inhumanity by outraging his poor little victim and it was for this crowning iniquity that he was tried and sentenced at Manchester. Why he should have been allowed to be at large so long we

do not know, for procuring or causing a child of tender years to beg in the street is of itself an offence, but we have little doubt that the fact that the man had lost an arm and the little girl a leg induced many to regard them as afflicted persons whose only resource was mendicancy and that persons who might have rendered real assistance in the cause of charity at the expense of a little trouble and inquiry adopted the easier course of dispensing a few coins and passing on their way. Medical men have some experience of beggars who trade upon their physical defects and are, as a rule, aware that among these are many as undeserving of charity as any not so afflicted. With the general public the exhibition of a mutilated stump or the threat to exhibit it is a sure way to their pockets and of this the mendicant fraternity is well aware. To give alms without inquiry, as a rule, does no good; frequently it does harm and the motive for giving is usually a selfish one, the real object being to allay in the easiest manner possible a temporary pain or emotion aroused in the giver by an unpleasant sight or a tale of woe. In the case upon which we have commented those who gave helped an obviously professional beggar to prolong his brief career of crime and lust.

THE PREVENTION OF CONSUMPTION AND OTHER FORMS OF TUBERCULOSIS.

LONDON OPEN-AIR SANATORIUM, NEAR WOKINGHAM.

A DEPUTATION of the National Friendly Society Conference has for some time been collecting information relative to sanatoriums for tuberculous patients and paying visits to various establishments of that description. In the autumn of 1902, soon after the holding of the first International Conference on Tuberculosis in Berlin,[1] the members of the deputation went to Germany to inspect the various sanatoriums and institutions provided by the State Sick Insurance Fund, and on Feb. 7th they visited the London Open-air Sanatorium near Wokingham which was inspected by the three winners of the King's prizes, and the plan of which closely resembles that laid down in Dr. A. C. Latham's essay. The deputation was received in the absence of the chairman, Mr. Rube, by Mr. Malcolm A. Morris, the vice-chairman, Dr. A. P. Hillier, one of the visiting physicians, and Dr. C. C. Chidell, the medical superintendent. The sanatorium, which was built at a cost of £36,000, is mainly intended for tuberculous patients of the middle and poorer professional classes, who pay the low inclusive charge of three guineas a week. The buildings are in the midst of 80 acres of pine woods and stand on sandy soil at an altitude of 220 feet. Each patient occupies a separate bedroom facing south and shelters, some of them lighted by electricity, are placed about the grounds. The visitors appeared to be very favourably impressed with the arrangements. Two resident medical officers are in charge of the patients in the sanatorium. The secretary's office in London is at 20, Hanover-square, W.

HAILEY OPEN-AIR SANATORIUM, IPSDEN, WALLINGFORD.

In Germany there are hundreds of sanatoriums maintained by insurance societies which find it financially profitable to cure their subscribers rather than to pay the claims which the societies would have to meet were the disease allowed to run its course. In England there are a few municipal and gratuitous sanatoriums and a few others where the treatment is provided at a nominal fee. Many patients, however, who return to their former unhealthy surroundings and dangerous occupations run great risks of relapse. Sanatoriums may therefore be advantageously combined with working colonies where poor patients can be put in the way of fitting themselves for a useful out-door life after the cure has been effected. An industrial sanatorium farm colony has just been opened at Ipsden, near Wallingford, by Dr. C. E. Reinhardt and Mr. Frank Fowler, who conduct the Hailey Sanatorium, near Wallingford, and the Stourfield Park Sanatorium, Bournemouth, for wealthier patients. At the Farm Colony Sanatorium patients are received at a small charge and are expected to work at such employment as the resident physician may find them physically and otherwise fit for; amongst other avocations they have the opportunity of learning pheasant-farming, poultry-rearing, gardening, and various agricultural operations, in order to gain experience in such out-door occupations as may be useful to them after they leave the sanatorium.

[1] THE LANCET, Nov. 1st (pp. 1204, 1216) and Nov. 8th, 1902 (p. 1276).

DIDWORTHY SANATORIUM FOR CONSUMPTIVES.

On Jan. 23rd the Devon and Cornwall Sanatorium for Poor Consumptive Patients at Didworthy, Brent, was inspected by representatives of the urban and rural district councils of the two counties. At present it is intended to use the sanatorium for 14 patients—seven male and seven female—with a resident medical officer and nurses. It is hoped that accommodation for 60 patients may be provided in course of time. The house and estate have been purchased by voluntary subscriptions for £4000. The additional cost of alterations, additions, laying out the grounds, and furnishing will be about £2500. Towards this sum there are £1000 in hand, leaving £1500 still to be raised, and the committee trusts that this sum will soon be forthcoming so as to enable it to open the institution in the spring free from debt.

WINSLEY SANATORIUM.

A deputation from the Gloucestershire, Somerset, and Wilts Branch of the National Association for the Prevention of Consumption and other Forms of Tuberculosis recently made an application to the Gloucester city council for a contribution towards the Winsley sanatorium scheme. A sub-committee of the council was appointed to consider the matter, when a motion was proposed to the effect that in view of the inadequacy of the Winsley scheme to meet the requirements of the city of Gloucester and the expenses connected therewith the council should take into consideration the question of using its power under the Public Health Act and of making its own provision for patients within the area of its control. Mr. H. E. Waddy, surgeon to the Gloucester Infirmary, moved an amendment that the council should be recommended to accede to the application of the deputation to the extent of contributing £250 for the provision of one bed at the sanatorium and of paying £65 a year for maintaining it so long as the council may think fit to do so. The amendment was lost and the original motion was carried. When the matter afterwards came before the city council for discussion Mr. Waddy's amendment to give the contribution proposed was altered by the addition of the words "subject to a formal agreement being entered into containing terms satisfactory to this council," and in that form was adopted *nem. con.*

RAILWAY COMPANIES AND SPITTING.

The Great Eastern Railway Company has recently placarded Liverpool-street station and other stations on their line with large posters printed in bold type, as follows:—

Prevention of Consumption.

To aid in the prevention of consumption, and in their own interests, all persons are earnestly requested not to spit on the floor of any vehicle, railway station, or other public resort.

London, December, 1902. J. F. S. GODDAY, General Manager.

In the smoking carriages of the Central London Railway there are placards with the words "Please do not spit."

THE "STETHOSCOPE."

The first number of the *Stethoscope*, "a journal devoted to the cure or prevention of consumption," has just been published at 6, Duke-street, Adelphi, London, W.C. We wish our contemporary every success, but we nevertheless think that on ethical grounds there are some objections to articles headed "The Man of the Moment" as well as to the embellishment (?) of articles by likenesses of medical practitioners.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

MEETING OF THE COUNCIL.

AN ordinary meeting of the Council was held on Feb. 12th, Sir HENRY G. HOWSE, the President, being in the chair.

It was resolved that diplomas of Membership should be issued to 96 candidates and that diplomas of Public Health should be issued jointly with the Royal College of Physicians of London to 18 candidates.

It was resolved that arrangements should be made for the delivery of six Hunterian lectures in November and

that an advertisement should be issued inviting applications for election to the office of Hunterian Professor.

A report was received from the Committee of Management formulating a reply to the report of the visitor and the inspector of the General Medical Council upon the examinations in chemistry and biology of the Conjoint Board. The report was approved and adopted.

The Council appointed Mr. Bernard Pitts a member of the Board of Examiners in Dental Surgery in the vacancy caused by the retirement of Sir William H. Bennett, K.C.V.O.

The PRESIDENT reported that in pursuance of the provisions of the Bradshaw bequests he had chosen Mr. Henry Morris as Bradshaw lecturer for the ensuing collegiate year.

A report was read from Mr. REGINALD HARRISON upon the Cairo medical school and hospital. It was referred to the Committee of Management to consider in reference to the application by that school for recognition and a cordial vote of thanks was given to Mr. Harrison.

A letter was read from the secretary of the Sanitary Institute reporting that the twenty-first congress and exhibition of the institute would be held at Bradford from July 7th to 11th, 1903, and inviting the Council of the College to send delegates. It was resolved to leave it to the President to appoint delegates.

It was resolved to appoint a committee to consider and to report as to whether any, and if so what, honorarium should be given to members of the Council called upon on behalf of the College to read essays submitted in competition for prizes.

THE HUNTERIAN ORATION.

The biennial Hunterian Oration was delivered on Feb. 14th in the theatre of the College by Sir Henry Howse who in the later part of his address drew attention to Hunter's prevision of some of the results of modern geological inquiry. The conditions under which fossil bones were preserved convinced him that animal life had existed on the earth for thousands of centuries, an opinion which was so much at variance with the accepted doctrines of the day that a geological friend advised him to alter the phraseology into "thousands of years." Rather than accept this compromise he withdrew the paper from being read before the Royal Society, as originally intended, and it was only published in 1859.

THE BANQUET.

The banquet in the evening was held in the library of the College. The President was in the chair and the company included Lord Roberts (the Commander-in-Chief of the Army), Lord Shand, Sir William Church, Sir Arthur Rücker, Sir Harry Johnston, Sir Thomas Smith, Sir Douglas Powell, Sir Henry Norbury, Sir William Taylor, Professor James Dewar, Signor Marconi, and Professor Clifford Allbutt. After the toast of "The Memory of John Hunter" the PRESIDENT proposed the health of Lord Roberts whom he was about to admit to the Honorary Fellowship of the College. The Honorary Fellowship, he said, was not one of the old-established diplomas; in fact, it was only created by the Royal Charter which was granted on the occasion of the centenary of the College in 1900. Prior to the granting of this charter the College had not at its disposal any honorary title or mark of distinction which could be conferred on the foreign surgeons invited to attend the centenary celebrations. The list of foreign Honorary Fellows was augmented by the names of a few eminent personages in this country who were not surgeons. The present King, while still Prince of Wales, had been graciously pleased to accept a Fellowship and a similar distinction had also been conferred on two Prime Ministers. This Fellowship was honorary in the full meaning of the word, for the holders of it were not entitled either to practise surgery or to vote in the College. The Council had decided to offer it to Lord Roberts in view of the great services which he had rendered to his country as the general commanding in the South African war. There were also special reasons for the medical profession feeling grateful to Lord Roberts, because it was doubtful if there had ever been a commander who had felt a greater interest in the medical organisation of the army or who had done more to help the military surgeons in meeting the unavoidable difficulties which they encountered. The President at the conclusion of his speech formally conferred the Honorary Fellowship on Lord Roberts.

Lord ROBERTS thereupon said that he had been for a long time looking forward with pleasurable expectation to this event and he now felt not only honoured by his new distinction but quite overcome by the cordiality of his reception. More than two years ago he had received a letter informing him that on the proposition of the late Sir William Mac Cormac the Council had agreed to offer him the Honorary Fellowship of the College, but as the war was still in progress he felt some reluctance to be the recipient of honours or rewards. Now that peace was secured he was delighted to be the guest of the College and the postponement of the ceremony had only served to add to the gratification which he experienced in being present. He was deeply sensible of the compliment which had been paid him and very proud to have inscribed his name on the rolls of the College. He accepted the honour not only for himself but for the navy, the army, and the auxiliary forces, to whom all the success that he was able to gain in South Africa was owing. In speaking of the navy, the army, and the reserve forces it was not usual to particularise any section of them, but in the circumstances he could hardly avoid making special reference to the services of the Royal Army Medical Corps. Only those who took part in the war could thoroughly appreciate the devotion of the officers and men of that corps to their work, the arduous nature of the task which they had to undertake, and the admirable manner in which they fulfilled it. He was at Bloemfontein when enteric fever broke out there and for some time it seemed to him that it would hardly be possible to deal adequately with the enormous number of sick who had to be treated during the two months that the army was in that place. At Kroonstad, a few weeks later, the state of the case was perhaps worse, because the only available accommodation consisted of the church and one or two small hospitals and houses, but the way in which the medical officers coped with these emergencies excited his admiration. The Royal Army Medical Corps were greatly encouraged by the presence among them of the eminent civilian surgeons who came to South Africa, such as Sir William Mac Cormac, Sir William Stokes, Sir Frederick Treves, Mr. G. L. Cheatle, Mr. Watson Cheyne, Mr. John Chiene, Mr. Clinton T. Dent, Sir Thomas Fitzgerald, Mr. G. H. Makins, and many others. The skill and advice of these gentlemen were of very great service to the army in South Africa. In conclusion Lord Roberts said that he would always do his best to assist any scheme which might be for the benefit of the sick and wounded.

Mr. JOHN TWEEDY proposed the health of "The Visitors," to which the Bishop of ROCHESTER and Sir HARRY JOHNSTON replied.

Sir A. RÜCKER proposed "The President and Orator" and the response by Sir HENRY HOWSE brought the proceedings to a close.

Looking Back.

FROM

THE LANCET, *SATURDAY*, FEB. 19, 1825.

SIR ASTLEY COOPER AND THE BOROUGH PUPILS.

SIR ASTLEY COOPER, after having been a Lecturer on Surgery at St. Thomas' Hospital almost thirty years, has felt it necessary to resign the important duties connected with that office to others, who, being much younger in life, are more competent, physically, to discharge those duties, and with whose scientific qualifications he is sufficiently satisfied to appoint them his successors.

It has been the practice, at the Borough School, to present each of the lecturers with a piece of plate on his resignation; and a meeting of the pupils was called to consider of the propriety of presenting Sir Astley with a similar proof of their respect. The meeting was held, and the proposition was negatived. The truth of the matter is this: the pupils now attending the practice of the Borough Hospitals feel themselves aggrieved, because Sir Astley announced, by advertisement, his intention of continuing the anatomical lectures *jointly* with Mr Green. This has not been done, and we believe the indisposition of the worthy Baronet has been the principal cause of the non-performance of his pledge. Many of his pupils say, "we have not had the

pleasure even of hearing Sir Astley once, and why should we become subscribers to a piece of plate?"

It is then, simply, because the students have not been made acquainted with the causes of the sudden resignation of Sir Astley as a lecturer, *in propria forma*, after his name had appeared in the advertisement, that they have to complain, and on this account only has any public opposition been manifested to the proposed measure.

We understand that, at a subsequent meeting, a paper was handed round for those gentlemen to subscribe who felt inclined, which was afterwards directed to be left at Mr. Cox's library for signatures.

According to a curious statement in the Philosophical Magazine, the extraordinary number of cases of cancer and schirrous complaints, in that part of Kent and Sussex bordering on Tunbridge Wells, has engaged the attention of several medical men in that district, who are endeavouring to ascertain its cause. A similar remark seems to apply to many other counties, where the poor feed much upon dried hogsflesh, and can get but little vegetable food.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 8806 births and 4948 deaths were registered during the week ending Feb. 14th. The annual rate of mortality in these towns, which had been 20·1, 18·1, and 17·9 per 1000 in the three preceding weeks, further declined last week to 17·1 per 1000. In London the death-rate was 17·0 per 1000, while it averaged 17·2 per 1000 in the 75 other large towns. The lowest death-rates in these towns were 5·7 in King's Norton, 8·0 in Barrow-in-Furness, 8·2 in Handsworth, 9·1 in Bournemouth, 9·2 in Derby, 9·3 in West Hartlepool, 9·4 in East Ham, and 10·0 in Coventry; the highest rates were 21·4 in Newcastle-on-Tyne, 21·5 in Rochdale, 22·4 in Wallasey, 23·1 in Manchester, 23·2 in Bootle, 24·2 in Huddersfield, 26·4 in Hanley, and 28·8 in Tynemouth. The 4948 deaths in these towns last week included 457 which were referred to the principal infectious diseases, against 540, 493, and 512 in the three preceding weeks; of these 457 deaths 131 resulted from whooping-cough, 91 from measles, 70 from diphtheria, 65 from diarrhœa, 59 from scarlet fever, 32 from "fever" (principally enteric), and 9 from small-pox. No death from any of these diseases was registered last week in Bournemouth, Reading, Ipswich, Devonport, Burton-on-Trent, Wolverhampton, Handsworth, King's Norton, Bury, Stockton-on-Tees, or Swansea; while the highest death rates from the principal infectious diseases were recorded in Smethwick, Grimsby, Stockport, Wigan, Blackburn, Rotherham, Tynemouth, and Merthyr Tydfil. The greatest proportional mortality from measles occurred in Wigan and Manchester; from scarlet fever in Aston Manor and Stockport; from diphtheria in Northampton, Hanley, Blackburn, and Merthyr Tydfil; from whooping-cough in Willesden, Great Yarmouth, Smethwick, Grimsby, Stockport, and Rotherham; from "fever" in Walsall; and from diarrhœa in Middlesbrough. Six fatal cases of small-pox were registered last week in Liverpool and one each in London, Manchester, and Leeds, but not one in any other of the 76 large towns. There were six small-pox patients under treatment in the Metropolitan Asylums hospitals at the end of last week, against four, seven, and six at the end of the three preceding weeks; one new case was admitted during the week, against none, six, and four in the three preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital, which had declined from 2528 to 1941 on the seven preceding Saturdays, had further decreased to 1919 on Saturday, Feb. 14th; 246 new cases were admitted during the week, against 227, 226, and 189 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 411, 355, and 315 in the three preceding weeks, further declined last week to 267 and were 179 below the corrected average number. The deaths directly attributed to influenza in London last week numbered 24, having been 43, 25, and 39 in the three preceding weeks. The causes of 62, or 1·3 per cent., of the deaths in the 76 large towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in London, West Ham, Leicester, Nottingham, Salford, Bradford, Leeds, and in 38 other smaller towns; the largest proportions of uncertified deaths were registered in Hanley, Aston Manor, Coventry, St. Helens, Halifax, Sunderland, South Shields, and Gateshead.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 24·6, 21·3, and 21·7 per 1000 in the three preceding weeks, declined again to 18·1 per 1000 during the week ending Feb. 14th, but was 1·0 per 1000 in excess of the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 10·8 in Perth and 14·9 in Edinburgh to 22·2 in Leith and 22·3 in Aberdeen. The 594 deaths in these towns last week included 32 which were referred to whooping-cough, 16 to diarrhœa, 15 to measles, 11 to "fever," eight to scarlet fever, and three to diphtheria, but not one to small-pox. In all, 85 deaths resulted from these principal infectious diseases last week, against 102, 81, and 80 in the three preceding weeks. These 85 deaths were equal to an annual rate of 2·6 per 1000, which was 1·0 per 1000 above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of whooping-cough, which had been 52, 32, and 28 in the three preceding weeks, rose again last week to 32, of which 22 occurred in Glasgow, three in Edinburgh, two in Dundee, and two in Leith. The deaths from diarrhœa, which had been 13 and 19 in the two preceding weeks, declined again to 16 last week, and included eight in Glasgow, three in Dundee, and two in Greenock. The fatal cases of measles, which had been 20 and 16 in the two preceding weeks, further declined last week to 15, of which 11 were registered in Aberdeen, two in Glasgow, and two in Edinburgh. The deaths referred to different forms of "fever," which had been eight, five, and six in the three preceding weeks, further rose to 11 last week, and included 10 in Glasgow. The fatal cases of scarlet fever, which had been five, four, and four in the three preceding weeks, increased last week to eight, of which four occurred in Glasgow and two in Paisley. The deaths referred to diseases of the respiratory organs in these towns, which had been 183, 173, and 134 in the three preceding weeks, further declined last week to 112, and were 99 below the number in the corresponding period of last year. The causes of 21, or nearly 4 per cent., of the deaths registered in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 28·1, 24·8, and 26·4 per 1000 in the three preceding weeks, declined again to 25·0 per 1000 during the week ending Feb. 14th. During the past four weeks the death-rate has averaged 26·1 per 1000, the rates during the same period being 18·3 in London and 18·1 in Edinburgh. The 182 deaths of persons belonging to Dublin registered during the week under notice showed a decline of 10 from the number in the preceding week, and included 14 which were referred to the principal infectious diseases, against 10, 10, and nine in the three preceding weeks; of these, four resulted from diarrhœa, three from scarlet fever, three from whooping-cough, two from measles, one from diphtheria, and one from "fever," but not one from small-pox. These 14 deaths were equal to an annual rate of 1·9 per 1000, the death-rates last week from the same diseases being 1·8 in London and 1·3 in Edinburgh. The fatal cases of diarrhœa, which had been six and one in the two preceding weeks, rose again last week to four. The deaths from scarlet fever, which had been two, three, and two in the three preceding weeks, increased again to three last week. The three fatal cases of whooping-cough corresponded with the number in the preceding week. The 182 deaths in Dublin last week included 26 of children under one year of age and 46 of persons aged 60 years and upwards; the deaths both of infants and of elderly persons showed a considerable decline from the numbers recorded in the preceding week. Six inquest cases and three deaths from violence were registered; and 61, or one-third, of the deaths occurred in public institutions. The causes of 10, or more than 5 per cent., of the deaths registered in Dublin last week were not certified.

VITAL STATISTICS OF LONDON DURING JANUARY, 1903.

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality in the City of London and in each of the metropolitan boroughs.

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING JANUARY, 1903.

(Specially compiled for THE LANCET.)

Cities and Boroughs.	Estimated population in the middle of 1903	Notified Cases of Infectious Disease.											Deaths from Principal Infectious Diseases.										Deaths from all causes.	Death-rate per 1000 living.	Deaths of Infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.*	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON	4,613,812	14	1030	681	—	174		19	386	—	2306	6·5	2	156	37	63	272	—	31	—	68	629	1·8	6455	18·2	127
West Districts.																									
Paddington	146,032	—	14	8	—	2	—	1	10	—	35	3·1	—	—	—	—	13	—	1	—	1	15	1·3	185	16·5	157
Kensington	178,409	—	17	7	—	7	—	1	21	—	53	3·9	—	—	—	—	16	—	—	—	5	21	1·5	246	18·0	142
Hammersmith	115,303	—	40	12	—	8	—	—	9	—	69	7·8	—	—	1	1	9	—	1	—	2	14	1·6	148	16·7	157
Fulham	147,780	3	38	34	—	3	—	2	5	—	85	7·5	—	1	1	3	11	—	—	—	3	19	1·7	171	15·1	129
Chelsea	74,169	—	14	12	—	—	—	—	5	—	31	5·4	—	1	—	3	3	—	—	—	1	8	1·4	117	20·6	113
City of Westminster	179,052	1	38	17	—	8	—	—	6	—	70	5·1	—	1	—	1	4	—	—	—	4	10	0·7	228	16·6	150
North Districts.																									
St. Marylebone	131,234	1	18	13	—	7	—	—	14	—	53	5·3	—	2	—	3	16	—	2	—	2	25	2·5	218	21·7	107
Hampstead	85,197	—	18	7	—	2	—	—	2	—	29	4·4	—	—	—	—	3	—	—	—	—	3	0·5	79	12·1	96
St. Pancras	235,716	—	49	42	—	3	—	—	16	—	110	6·1	—	12	2	1	10	—	1	—	3	29	1·6	342	18·9	116
Islington	339 137	2	61	56	—	12	—	2	21	—	154	5·9	—	7	2	3	34	—	4	—	3	53	2·0	498	19·1	157
Stoke Newington	52,069	—	6	3	—	1	—	—	1	—	11	2·8	—	—	—	—	—	—	—	—	—	—	—	70	17·5	115
Hackney	224,082	—	41	43	—	12	—	2	19	—	117	6·8	—	3	3	7	13	—	3	—	1	30	1·7	276	16·1	126
Central Districts.																									
Holborn	57,845	—	9	6	—	2	—	1	5	—	23	5·2	—	—	1	—	3	—	—	—	—	4	0·9	90	20·3	64
Finsbury	99,717	—	26	8	—	6	—	—	9	—	49	6·4	—	2	—	1	16	—	1	—	3	23	3·0	205	26·8	103
City of London	24,539	—	8	2	—	1	—	—	1	—	12	6·4	—	—	—	—	—	—	—	—	1	1	0·5	41	21·8	37
East Districts.																									
Shoreditch	117,513	—	14	10	—	16	—	2	15	—	57	6·3	—	8	—	2	4	—	2	—	2	18	2·0	196	21·7	95
Bethnal Green	130,028	—	19	25	—	7	1	—	20	—	72	7·2	—	6	1	2	5	—	—	—	2	16	1·6	205	20·5	121
Stepney	302,153	2	51	50	—	15	—	—	40	—	158	6·6	—	14	3	1	16	—	2	—	3	39	1·7	462	19·9	127
Poplar	169,550	2	23	32	—	12	—	1	16	—	86	6·6	2	6	2	5	11	—	2	—	6	34	2·6	260	20·0	120
South Districts.																									
Southwark	207,369	—	67	34	—	4	—	2	27	—	134	8·4	—	9	4	1	9	—	1	—	7	31	1·9	351	22·1	152
Bermondsey	129,801	—	37	14	—	4	—	1	15	—	71	7·1	—	11	5	—	2	—	1	—	4	23	2·3	207	20·8	172
Lambeth	307,711	—	59	31	—	9	1	2	14	—	116	4·9	—	11	3	5	25	—	3	—	3	50	2·1	462	19·6	131
Battersea	173,422	—	66	38	—	5	—	—	16	—	125	9·4	—	3	—	2	10	—	1	—	3	19	1·4	195	14·7	141
Wandsworth	249,678	1	83	51	—	11	—	1	21	—	168	8·8	—	3	2	6	13	—	3	—	3	30	1·6	286	14·9	83
Camberwell	265,562	—	67	40	—	9	—	—	28	—	144	7·1	—	18	—	6	10	—	3	—	2	39	1·9	361	17·7	140
Deptford	112,537	—	42	24	—	1	—	—	10	—	77	8·9	—	27	3	3	9	—	—	—	2	44	5·1	198	22·9	177
Greenwich	99,824	—	26	18	—	1	—	—	7	—	52	6·8	—	5	2	3	2	—	—	—	2	14	1·8	108	14·1	72
Lewisham	136,405	—	63	28	—	4	—	1	6	—	102	9·7	—	4	1	3	2	—	—	—	—	10	1·0	118	11·3	75
Woolwich	121,478	—	16	15	—	—	—	—	7	—	38	4·1	—	2	1	1	3	—	—	—	—	7	0·8	133	14·3	95
Port of London	—	2	—	1	—	2	—	—	—	—	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including membranous croup.

With regard to the notified cases of infectious diseases it appears that the number of cases reported to be suffering from one or other of the nine diseases specified in the table was equal to an annual rate of 6·5 per 1000 of the population, estimated at 4,613,812 persons in the middle of the year. In the three preceding months the rates had been 10·0, 9·1, and 7·4 per 1000 respectively. The rates were considerably below the average in Paddington, Kensington, Hampstead, Stoke Newington, Lambeth, and Woolwich, while they showed the largest excess in Hammersmith, Southwark, Battersea, Wandsworth, Deptford, and Lewisham. The prevalence of small-pox showed a slight increase over that recorded in the preceding month; of the 14 cases notified during January, three belonged to Fulham and two each to Islington, Stepney, and Poplar; while two others were notified by the Port sanitary authority. The Metropolitan Asylums hospitals contained seven small-pox patients at the end of last month, against 19, 17, and 14 at the end of the three preceding months; the weekly admissions averaged three, having been three in each of the three preceding months also. The prevalence of scarlet fever, which had shown a considerable decline during the preceding month, further decreased last month; this disease showed the highest proportional prevalence in Hammersmith, the City of London, Southwark, Battersea, Wandsworth, Deptford, and Lewisham. The number of scarlet fever patients under treatment in the Metropolitan Asylums hospitals, which had been 2820, 2705, and 2327 at the end of the three preceding months, had further declined to 1980 at the end of last month; the weekly admissions averaged 212, against 358, 301, and 236 in the three preceding months. The prevalence of diphtheria showed a slight diminution from that recorded in the preceding month; among the various metropolitan boroughs this disease was proportionally most prevalent in Fulham, Battersea, Wandsworth, Deptford, and Lewisham. There were 936 diphtheria patients under treatment in the Metropolitan Asylums hospitals at the end of January, against 941, 1019, and 981 at the end of the three preceding months; the weekly admissions averaged 131 last month, against 149, 157, and 136 in the three preceding months. Enteric fever showed a considerable decrease last month as compared with the prevalence recorded in recent months; the greatest proportional prevalence of this disease occurred in Hammersmith, St. Marylebone, Hackney, Finsbury, Shoreditch, Bethnal Green, and Poplar. The number of enteric fever patients in the Metropolitan Asylums hospitals, which had been 401, 339, and 210 at the end of the three preceding months, had further declined to 172 at the end of January; the weekly admissions averaged 24 last month, against 59, 37, and 30 in the three preceding months. Erysipelas was proportionally most prevalent in Kensington, St. Marylebone, Shoreditch, Bethnal Green, Stepney, Southwark, Bermondsey, and Camberwell. The 19 cases of puerperal fever notified during the month included two each in Fulham, Islington, Hackney, Shoreditch, Southwark, and Lambeth.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various metropolitan boroughs, the deaths occurring in public institutions having been distributed among the several boroughs in which the deceased persons had previously resided. During the four weeks ending Jan. 31st the deaths of 6455 persons belonging to London were registered, equal to an annual rate of 18·2 per 1000, against 16·0, 17·4, and 18·2 per 1000 in the three preceding months. The lowest death-rates last month in the various metropolitan boroughs were 11·3 in Lewisham, 12·1 in Hampstead, 14·1 in Greenwich, 14·3 in Woolwich, 14·7 in Battersea, and 14·9 in Wandsworth; the highest rates were 21·7 in St. Marylebone and in Shoreditch, 21·8 in the City of London, 22·1 in Southwark, 22·9 in Deptford, and 26·8 in Finsbury. The 6455 deaths from all causes included 629 which were referred to the principal infectious diseases; of these, two resulted from small-pox, 156 from measles, 37 from scarlet fever, 63 from diphtheria, 272 from whooping-cough, 31 from enteric fever, and 68 from diarrhœa, but not one either from typhus or from simple continued fever. No death from any of these infectious diseases was recorded in Stoke Newington; among the other boroughs they caused the lowest death-rates in the City of Westminster, Hampstead, Holborn, the City of London, and Woolwich; and the highest rates in St. Marylebone, Finsbury, Poplar, Bermondsey, Lambeth, and Deptford. The two fatal cases of small-pox both belonged to Poplar. The 156 deaths from measles showed a decline of 50 from the corrected average number; among the various metropolitan boroughs this disease was proportionally most fatal in St. Pancras, Shoreditch, Bermondsey, Camberwell, Deptford, and Greenwich. The 37 fatal cases of scarlet fever were 20 below the average number in the corresponding periods of the ten preceding years; this disease showed the greatest proportional mortality in Hackney, Holborn, Southwark, Bermondsey, Deptford, and Greenwich. The 63 deaths from diphtheria were 114 less than the corrected average number; among the various metropolitan boroughs this disease was proportionally most fatal in Chelsea, Hackney, Poplar, Wandsworth, Deptford, and Greenwich. The 272 fatal cases of whooping-cough were 91 in excess of the average number in the corresponding periods of the ten preceding years; among the various metropolitan boroughs the greatest proportional mortality from this disease occurred in Paddington, Kensington, St. Marylebone, Islington, and Finsbury. The 31 deaths from enteric fever showed a decline of 21 from the corrected average number; the highest "fever" death-rates last month were recorded in St. Marylebone, Islington, Hackney, Shoreditch, Poplar, Wandsworth, and Camberwell. The 68 fatal cases of diarrhœa were slightly in excess of the average number in the corresponding periods of the ten preceding years; among the various metropolitan boroughs this disease was proportionally most fatal in Kensington, the City of Westminster, Finsbury, Poplar, Southwark, and Bermondsey. In conclusion, it may be stated that the aggregate mortality in London last month from these principal infectious diseases was nearly 15 per cent. below the average.

Infant mortality in London during January, measured by the proportion of deaths among children under one year of age to registered births, was equal to 127 per 1000. The lowest rates of infant mortality were recorded in Holborn, the City of London, Shoreditch, Wandsworth, Greenwich, Lewisham, and Woolwich; and the highest rates in Paddington, Hammersmith, Islington, Southwark, Bermondsey, and Deptford.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet Surgeon J. S. Lambert to the *President*, for Survey of Stores at the Royal Victoria Victualling Yard, Deptford. Staff Surgeons: P. B. Handyside to the *Vengeance*; C. S. Woodwright to the *President*, for three months' course of hospital study; and N. L. Richards to the *President* for Survey of Stores at the Royal Victoria Victualling Yard at Deptford. Surgeons: H. E. Tomlinson to the *Egeria*; C. A. G. Phipps to Plymouth Marines (temporary); and H. A. Julius to the *Pembroke*.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel J. W. Robinson assumes command of the Depôt and Training School at Aldershot, in succession to Colonel H. E. R James. Lieutenant J. A. Black joins at Woolwich. Captain F. E Gunter is to be employed in China with the Legation Guard. Lieutenant-Colonel H. R. Whitehead joins at Woolwich. Captain T. J. Crean, V.C., joins at Aldershot and is posted to the 3rd Station Hospital for duty.

ARMY MEDICAL RESERVE OF OFFICERS.

Captain William K. Clayton, South York-hire Volunteer Brigade Bearer Company, to be Surgeon-Captain. Dated Feb. 14th, 1903.

VOLUNTEER CORPS.

Royal Garrison Artillery (Volunteers): The Tynemouth: Surgeon-Captain H. R. Bramwell to be Surgeon-Major. Dated Feb. 14th, 1903. *Rifle:* 2nd Volunteer Battalion the Suffolk Regiment: Surgeon-Lieutenant-Colonel J. S. Holden resigns his commission, with permission to retain his rank and to wear the uniform of the battalion on retirement. Dated Feb. 14th, 1903. 1st Volunteer Battalion the South Staffords-hire Regiment: Surgeon-Lieutenant T. Thompson to be Surgeon-Captain. Dated Feb. 14th, 1903. 21st Middlesex (the Finsbury): Surgeon-Lieutenant-Colonel J. Adams to be Brigade-Surgeon-Lieutenant-Colonel on appointment as Senior Medical Officer to the 5th London

Volunteer Infantry Brigade. Dated Feb. 3rd, 1903.
4th (Donside Highland) Volunteer Battalion the Gordon Highlanders: Brigade-Surgeon-Lieutenant-Colonel W. Paterson resigns his commission, with permission to retain his rank and to wear the uniform of the battalion on retirement, vacating at the same time the appointment of Senior Medical Officer of the Gordon Volunteer Infantry Brigade. Dated Feb. 14th, 1903.

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

Glasgow Companies: Lieutenant J. Wright resigns his commission. Dated Feb. 14th, 1903.

THE CLOTHING AND EQUIPMENT OF THE MODERN SOLDIER.

In a recently published pamphlet[1] Professor Krocker gives his views regarding the modern soldier's dress and equipment. The exigencies of military discipline impose on the soldier a form of dress which takes no regard of individual peculiarities and can only partially counteract atmospheric and climatic vicissitudes. The well-being of the soldier's body under the greatly varying conditions induced while at work or reposing, in peace time or during war, cannot be entirely safeguarded; and too often the requirements of hygiene have to give place to those of fashion. Formerly the protection of the wearer from the assaults of the enemy had to be taken into consideration by the uniform makers, but the soldier of the present day only wears armour by way of ornament. When he is ordered on active service cuirasses, epaulettes, &c., are left behind. From the hygienic point of view two chief modifications should be aimed at by those responsible for the soldier's dress: simplification and diminution of weight. For 40 years laudable efforts in this direction have been made throughout the military world, but it is in the German army especially that ornament has been sacrificed to utility. In the brigade of occupation on duty in China the latest and most advanced ideas regarding hygienic clothing and equipment have been given effect to. It is manifestly impossible to devise a single suit of clothing which shall act as efficaciously in summer as in winter, which shall maintain the temperature of the body within its physiological limits irrespectively of that of the air, while at the same time it protects the wearer from all atmospheric variations. In a hot climate the clothing should absorb the least possible amount of solar caloric, but should not interfere with the free elimination of body heat, particularly in the form of sweat; whereas in a cold climate solar absorption should be encouraged and the heat of the body retained, but with the least possible impediment to both aeration and transpiration. Military clothing does not, as a rule, respond to these contradictory requirements. It is true that each man has a cloak and a segment of tent-cloth and also canvas trousers and jacket. He can likewise substitute a forage cap for his helmet and a pair of shoes for his boots, but hygienically speaking it would be well if he could be provided with two complete sets of clothes, inclusive of underclothing. In the brigade of occupation already mentioned each soldier's kit was composed as follows: three shirts and three pairs of drawers of light cotton, a pair of trousers and a blouse of khaki-coloured cotton, three pairs of semi-cotton hose, a cork helmet with neck protector, and a khaki-coloured cotton forage cap with peak. The above were for wear during the hot season. For winter the following were provided: two woollen shirts and two pairs of woollen drawers, trousers and coat of iron-grey cloth lined with calico, three pairs of woollen socks, leathern helmet, and cloth forage cap. Extras: one flannel vest and two flannel waist belts, two shawls, and a pair of gloves. In addition fur pelisses and foot-warmers were served out to cavalry soldiers, the foot-warmers being attachable to the stirrups. Each soldier was also supplied with a hooded cloak, a canvas section, and a waterproof sheet. Professor Krocker's further remarks on the quality of military clothing and underclothing, the influence of colour and cut, foot gear, and equipment will repay perusal.

[1] Jena: G. Fischer. 1902.

THE ROYAL VISIT TO THE HERBERT HOSPITAL, WOOLWICH.

On Feb. 16th the King and Queen paid a visit to the Herbert Hospital, Woolwich, and inspected the new nurses' quarters and the arrangements which have been made for the treatment of the patients. Their Majesties arrived at Well Hall Station at 3 20 P.M., where the King was presented with an address by the Mayor of Woolwich. The Royal party then drove to the Herbert Hospital and on alighting at the entrance to the new nurses' quarters the King and Queen were received by the matron-in-chief and members of the Advisory Board of Queen Alexandra's Imperial Military Nursing Service, Earl and Countess Roberts, General Sir T. Kelly-Kenny, Surgeon-General Sir William Taylor, K.C.B., Director-General A.M.S., Surgeon-General A. H. Keogh, C.B., Sir Frederick Treves, Bart., K.C.V.O., C.B., Major W. G. Macpherson, C.M.G., R.A.M.C., Lieutenant-Colonel H. R. Whitehead, R.A.M.C., in charge of the hospital, Lieutenant Colonel J. J. Lamprey, A.M.S. (retired), Major M. O'D. Braddell, R.A.M.C., registrar and secretary, Major and Brevet Lieutenant-Colonel S. Hickson, R.A.M.C., Major Wilson, R.A.M.C., Major Cottel, R.A.M.C. (retired), Captain K. M. Cameron, R.A.M.C., and others. After being shown through the re-constructed nurses' home Her Majesty expressed herself as being greatly pleased with all that she had seen and then examined the new uniforms of the nurses. The matrons, sisters, and nurses were afterwards presented with the badge of Queen Alexandra's Imperial Military Nursing Service by Her Majesty and the King and Queen then visited the surgical wards and conversed with the patients. In the operating theatre Sir Frederick Treves explained to His Majesty the use of some recent surgical appliances. Before the Royal party left the building the King presented to members of the Royal Army Medical Corps the medal for South Africa.

DEATHS IN THE SERVICES.

Surgeon-General Edward Baily Tuson, A.M.D. (retired) at Chelston Manor, Torquay, on Feb. 4th. He entered the army as assistant surgeon in 1844, became surgeon in 1854, surgeon-major in 1864, deputy surgeon-general in 1872, and retired with the honorary rank of surgeon-general in March, 1879. He served with the 12th Lancers in the Crimea in 1855 (medal with clasp and Turkish medal).

Surgeon-Major William Venour, A.M.D. (retired), on Feb. 4th, at Netherwood, Saundersfoot, in his sixty-ninth year. He entered the army as assistant surgeon in 1858, became surgeon in 1873, and attained the rank of surgeon-major in 1875. He served in the Ashanti campaign in 1873 and was attached to the 15th Hussars during the Afghan war of 1878–80 and took part in the advance to Khelat-i-Ghilzie. He was present at the affair at Takht-i-Pul, in medical charge of a squadron of the 15th Hussars and a half battery of Royal Horse Artillery (medal). In the Soudan expedition of 1884 he was in charge of a hospital at the base, and in the Burmese expedition of 1886–87 he was in medical charge of a field hospital (mentioned in despatches for services in the Soudan and Burma).

NEW REGULATIONS FOR PROBATIONERS OF THE INDIAN MEDICAL SERVICE.

According to an order which has just been issued probationers of the Indian Medical Service will be placed on the same footing as those of the Royal Army Medical Corps. We hope to find room for these regulations in an early issue.

Correspondence.

"Audi alteram partem."

THE RISE OF BLOOD PRESSURE IN LATER LIFE.

To the Editors of THE LANCET.

SIRS,—Like Sir Douglas Powell, who has written in your issue of Jan. 24th, p. 265, I much regret that I was unable to be present on the occasion of the reading of Professor T. Clifford Allbutt's paper before the Royal Medical and Chirurgical Society on Jan. 13th. It affords me much consolation, however, that I have been able to read not only the paper of Professor Allbutt but the comments thereon of Sir William H. Broadbent, Dr. Alexander Haig, Dr. Newton Pitt, Dr. H. D. Rolleston, Sir R. Douglas Powell, and Dr. William Russell, and himself. I join in the chorus of thanks to Professor Allbutt who has conveyed to us lessons of scientific truth (truth as I so interpret it) in striking phrases and has given me (at any rate) much opportunity for thought in the future.

It seems to be generally acknowledged that there is a

condi ion of increase above the normal mean of intra-arterial pressure in later life, but the causes of this increase are interpreted in a different manner by different observers. The author of the paper, Professor Allbutt, considers that the chief factor is viscosity of the blood—I presume a condition brought about by a perverted metabolism which renders it difficult to circulate through the arterioles, capillaries, and venules. Sir William Broadbent and Sir Douglas Powell, however, consider that the chief cause of the obstruction which leads up to the increased intra-arterial pressure is in the arterioles or the capillary network. It is all very well for Professor Allbutt to contend that vaso-constriction cannot be a chief cause because it has been proved to be transitory.[1] This would, no doubt, be valid if it were contended that it was the primary and only cause, but what if it is a partial cause co-operating with the blood change which he calls viscosity? Sir Douglas Powell says, as, I think, very pertinently, "Arterial contraction has also a more common cause, probably in the central nervous system." It is partly because I believe this doctrine to be true and partly because I desire to retain my inquiring mind that I venture to address you on this occasion. For in the first place, though the arteriole contraction may be, according to the evidence of rigid scientific investigation, in the normal organism fitful and transitory it may be quite otherwise when perverted metabolism inducing a morbid blood change is in existence as a concurring or reinforcing cause. In this communication it is my earnest desire to be *practical*. I know that for this sentence I deserve to be castigated by all those who have taken part in the discussion, from Professor Allbutt through the whole list. As if they also were not practical! By practical this time I mean brief and perhaps unsatisfactory because not developing sufficiently the arguments in proof of the views I hold. Let this, therefore, be a mere statement, not an apology; nevertheless, I will, if cross-examined, give reasons for the faith that is in me.

First of all I inquire of myself whether diseases, especially abnormalities of blood pressure and anomalies of circulation, have not in my own experience considerably changed within the last 12 years? My answer is, Yes, they have. Is there a notable cause for this if true? I think so. It is the presence or the frequent manifestation of a disease which we know as influenza. What is the nature of the disease? It is infectious and due to a special microbe—the minute bacillus of Pfeiffer. Has it, or have its toxins, any special manifestations which may go to elucidate the problem before us? In my opinion, emphatically yes. Its special manifestations are upon the nervous mechanism, on the peripheral nerves inducing neuritis varying and variable, on the spinal cord as I have myself traced,[2] and on the central nervous system as shown by the records of a host of observers. The evolution of the disease process in influenza is extremely slow. The degree of the initial symptoms bears no relation to the gravity of the symptoms of disease of the nervous mechanism which follow in its wake. In this regard we see, as was pointed out by the late Dr. Althaus, "an analogy with syphilis where the primary symptoms may be so slight that they attract very little attention and yet are followed by severe secondary and tertiary manifestations." Moreover, it is a matter of common experience that one individual may be infected many times. Immunity seems to be obtained with difficulty, if at all; and furthermore, the microbes and toxins of influenza appear to reinforce and to aggravate the effects of other microbic diseases and not in any sense to antagonise them. The bearing of these observations on the question at issue is that conditions of heightened arterial pressure have been greatly increased according to the observations of some men of experience in these later days in which influenza has been rife, and in many of them the causal relation can be traced, as some of us believe, to the vaso motor mechanism.

The question whether there has been, or may have been, any disturbance from this cause inducing a perversion of metabolism, wherefrom an increased viscosity of the blood, may be at first sight more obscure. I myself think, from clinical observation, that there has been such a cause of perversion. It seems to me that in many persons of a later period of life in whom vices of metabolism might be looked for infection by influenza has come as a determining or aggravating cause. Of course, this may be considered as a *petitio principii*, or a pious opinion mainly. But in my mind the conclusion is forced on by a formidable series of clinical experiences. The sum of the whole matter, then, in my opinion, *quantum valeat*, is that Professor Allbutt is right in his conclusion that intra-arterial pressure is raised in later life—a comforting conclusion in that it makes recovery from the earlier conditions hopeful and does not postulate an inevitable future arterio-sclerosis, and that the causes of such condition of heightened arterial pressure are probably two-fold—a contraction of arterioles due to some morbid condition of the vaso motor mechanism and a blood-change which may be termed "viscosity." The principles of treatment of the condition have been so ably though sententiously laid down by Professor Allbutt that I can serve no good purpose by attempting to add to them.

I am, Sirs, yours faithfully,

Harley-street, W., Feb. 11th, 1903. A. E. SANSOM.

[1] THE LANCET, Jan. 31st, 1903, p. 329.
[2] Liverpool Medico-Chirurgical Journal, 1895.

To the Editors of THE LANCET.

SIRS,—I am gratified by the interesting and instructive letters which my comments upon Professor Clifford Allbutt's paper have brought forth and I would not have intruded further in the correspondence, for I agree with Professor Allbutt that the main points raised require further work for their elucidation, only I desire to explain what appears to have been an obscure sentence in my letter. My argument was that inelasticity of degenerated vessels wasted the cardiac force and so tended to lower blood pressure. In order therefore to maintain the circulation at due pressure increased cardiac action was necessary and hypertrophy of the heart ensued. I think Dr. Harry Campbell and I are at one in regard to arteriole contraction being the important cause of increased blood pressure; I used the more comprehensive, if less exact, term arterial contraction because it is very certain that arteries of medium calibre partake in the contraction and furnish the clinical index of it, although the resistance to circulation would chiefly exist in the smaller arterioles. I have never been able to understand the mechanism of increased capillary resistance from altered conditions of blood, which I remember was much insisted upon by the late Sir W. Savory.

In my poor attempt to interpret Professor Allbutt's term "increased viscosity" I implied that the altered blood so described brought about arterial contraction through excitation of the vaso motor nerves producing the hypertonus of vessels referred to by Dr. Campbell, and I agree with his argument on this head, tonus and hypertonus being merely a matter of degree; indeed, in my Lumleian Lectures I spoke figuratively of the blood as being held in the grasp of the vessels to be tightened or relaxed at the behest of the nervous system. In bringing about this tonus and hypertonus, maintaining and regulating the blood pressure in varying and sometimes in morbid degrees, the suprarenal bodies would seem on clinical evidence to have an important function, witness the remarkable fall of blood pressure in Addison's disease and the toxic effects of adrenalin upon the vessels.

I am, Sirs, yours faithfully,

Wimpole-street, W., Feb. 16th, 1903. R. DOUGLAS POWELL.

To the Editors of THE LANCET.

SIRS,—Medical and scientific discussion ought to have two objects: first, an attempt to see eye to eye; and, second, the clear and unambiguous defining of the points on which there is diversity of opinion. For some time I have been contemplating a second paper on "hypertonus" and I thought that I could glean support from Professor T. Clifford Allbutt's Lane lectures. I wish to thank him for making it quite clear that he and I do not look at the vascular phenomena under consideration from the same standpoint. He looks from the physical standpoint, I look from the vital; he is attracted by the behaviour of fluid in tubes, I am by the response of the *living* tubes to their contained fluid. I think it no mean gain to have positions so clearly determined. One further word I should like to add, and that is to assure Professor Allbutt that in my choice of a word to express my appreciation of his high literary faculty and attainments I regret to have taken a word to which he attaches an unsavoury meaning. With reference to Dr. Harry Campbell's valuable letter, while I agree with much of it I think that he pays too little regard to the action of the capillaries. He makes it perfectly clear that he holds by the arterioles exclusively. I also note that he recognises hypertonus without raised

pressure only "when the heart has come to the very end of its tether"; in my experience it is much more common. These points can, however, be reserved for further discussion.

I am, Sirs, yours faithfully,

Edinburgh, Feb. 14th, 1903. WILLIAM RUSSELL.

THE ABUSE OF MEDICAL CHARITY.

To the Editors of THE LANCET.

SIRS,—The defence of the administration of the Bradford Children's Hospital, published by the honorary secretary, Mr. H. J. Jeffery, in THE LANCET of Feb. 7th, p. 398, to the charges made by the chairman of the Bradford board of guardians, calls for notice. It is not a little remarkable that Mr. Jeffery does not make the slightest reference to your leading article on the abuses at that hospital, but only refers to the charges of the chairman of the guardians. The same policy of silence was pursued in 1898, when your Special Commissioner made a report on the hospital abuse in Bradford, the Children's Hospital being very severely criticised. Then, as now, the board of that hospital took no notice whatever of your criticism and the abuses have continued unabated. Such tactics may to some extent prevent that attention being drawn to the flagrant abuse of the charity which would be caused by an attempted defence of the hospital management against your criticism. But it cannot fail to suggest the idea of inability to make a successful defence, and it certainly produces a very unfavourable opinion of the board when one sees that it is content to lie under the serious charge of mismanagement of trust funds without one word of protest. There may be times when "silence is golden," but to preserve the attitude of deaf-mutism when one is publicly charged with allowing charitable funds to be recklessly squandered is not usually regarded as dignified or proper. Such an attitude is indeed startling.

It is rather clever of Mr. Jeffery not to mention in his letter to you the charges brought against his board. This careful suppression tends to obliterate them from memory, and on reading his defence cursorily one might imagine that an injured innocent had been accused of—nothing in particular. But on contrasting his defence with the accusations it will be seen how inadequate it is. Indeed, Mr. Jeffery virtually admits the truth of all Mr. F. H. Bentham's charges. What Mr. Bentham is reported to have said about the Children's Hospital, in his general condemnation of the management of all our hospitals, is as follows: "The Children's Hospital has no recommendations. Children were taken into the institution without inquiry into the circumstances of the parents, though they were required afterwards, if able, to contribute. He was told that in every case the parents' word was taken, and he was not aware that any inquiries had been made through the C.O.S. [Charity Organisation Society]. The committee received £104 from that source in 1901 for 213 children with an average attendance of 37·2 days. In the out-patient department 2308 cases were dealt with. No inquiries were made into the circumstances and all comers were dealt with indiscriminately."

As Mr. Jeffery does not make any reference in his defence to any of these various points, except that as to "inquiry into the circumstances" of applicants for medical charity, it may be assumed he admits they are all correctly stated—viz., (1) that the paltry sum of £104 was collected from parents of children who spent 7781 sick days in hospital; (2) that there were 2308 out-patients and that no inquiry is made about them unless "deemed necessary" by the board; (3) that the board does not avail itself of the assistance of the Charity Organisation Society; (4) that all comers are indiscriminately treated; and (5) the parents' word is accepted in practically all cases. It requires some attention to see that in Mr. Jeffery's letter he is throughout only dealing with the 213 in-patients, except where he once refers to "all" patients.

Now, what is Mr. Jeffery's defence? 1. He says: "*Very many* of the cases treated at the hospital [i.e., in-patients, T. W. H.] are received on the recommendation of medical gentlemen in the town who naturally satisfy themselves that the position of the families is such as to justify an appeal to the charity." In other words the board makes no inquiry as to "very many of the cases." The assumption that the medical men who send these cases act as inquiry officers could be no justification for the board's neglect. The assumption is further no doubt quite unwarranted. Medical men do not act as inquiry agents as to their own patients and certainly will not do it to relieve the board of its duty. What "very many" cases means is uncertain. I would ask Mr. Jeffery if it means as much as 1 in 100; until I have his assurance I must doubt if it means so many. 2. "The bulk of the in-patients," he says, "are drafted into the hospital by the honorary medical staff from the out-patients' department, after careful examination and inquiry as to the circumstances of each family"; in other words, he says, the honorary staff are the inquiry officers of the hospital, their inquiries are made while prescribing for the applicants, and their investigations are thorough and satisfactory. How completely is the nature of a proper inquiry understood by Mr. Jeffery and his board if he thinks such an inquiry sufficient! How utterly has the medical staff sunk from the dignity of their profession, if as Mr. Jeffery alleges, while actually prescribing for the sick and suffering they engage in a minute inquisition of the means of the sufferers. I can say of one member of the staff that he indignantly repudiates having ever acted such an odious part as that of combined medical officer and charity organisation officer. Supposing the medical officers did stoop to this meanness, which I will not readily believe, they must accept the statements of the parents alone, as Mr. Bentham said.

It is obvious that the board does not take proper steps to safeguard the charitable funds intrusted to it. No doubt the staff will take occasion to repudiate the statement that they act as inquiry officers. I believe Mr. Jeffery is misinformed as to the facts. No reference was made by Mr. Bentham to the great abuse arising from the enormous number of quite trivial cases treated at this hospital (and at all the Bradford hospitals) or of the unnatural rate of increase of the number of patients, which has been out of all proportion to the increase of the population and the wealth of the city.

I am, Sirs, yours faithfully,

Bradford Feb. 10th, 1903. THOS. WHITESIDE HIME.

THE ANATOMY OF GLÉNARD'S DISEASE.

To the Editors of THE LANCET.

SIRS,—Dr. John Knott has been good enough to criticise in your pages[1] and at considerable length a recent effort of mine to explain the manner in which the abdominal viscera become displaced. The explanation which I offered has proved entirely unsatisfactory to Dr. Knott, especially in so far as it has upset certain preconceptions of his regarding the nature and action of the diaphragm. Amongst these preconceptions is that of the "relative immobility" of the central or cordiform tendon of the diaphragm. On the solitary occasion in which Dr. Knott had an opportunity of studying the movements of the diaphragm by the aid of the x rays he would have found had he fixed the screen and divided it into inch squares, that it was he and not the "accomplished physicist" that was deceived by the movements of the ribs. If he will take the trouble to examine the first ten subjects that come to hand he will find that the movements of the middle and lateral leaflets of the diaphragm correspond to the measurements given in my lecture. The experience will also convince Dr. Knott that it is a dangerous thing to generalise from a rough guess made on a single instance.

Dr. Knott cites the phenomena to be seen in a hiccoughing boy as irrefutable evidence of the relative immobility of the central tendon of the diaphragm. I followed minutely his directions for the production of hiccoughing as regards boy, bribe, and oatmeal, but failed to produce it in any one of the six individuals investigated. Whether the failure was due to the inhibition of expectancy or to some further error of observation on the part of Dr. Knott I cannot say. There can be no doubt, however, that he is perfectly right in asserting that in *hiccoughing* the central part of the diaphragm is relatively immobile although he is apparently quite unaware of the cause of the immobility. At the commencement of a hiccough, as may be seen in the illuminated body, all the muscular fibres of the diaphragm, both costal and spinal, suddenly contract and attempt to jerk the central tendon downwards. Its descent is arrested and it remains locked by the sudden

[1] THE LANCET, Feb. 7th, p. 394.

closure of the glottis. When the glottis is opened the central tendon again resumes its ordinary respiratory mobility. I am indebted to Dr. Knott for calling my attention to the phenomena of hiccoughing, for it provides another instance of the accuracy of my "preposterous explanation" of the action of the diaphragm. On inspiration the diaphragm expends its force in three directions: (1) in pushing the abdominal viscera forwards and downwards; (2) in drawing the viscera of the thorax in corresponding directions; (3) in raising the abdominal ends of the lower six pairs of ribs (with the exception of the twelfth). In normal respiration the diaphragm assists the external intercostals in elevating the costal margin, but if, as in hiccoughing, the thoracic and abdominal viscera are rendered immoveable, the force of the diaphragm is spent, as Dr. Knott so clearly demonstrates, in drawing the abdominal ends of the lower ribs upwards and inwards—that is to say, the diaphragm draws its moveable costal insertion towards its firm spinal margin, a movement which Dr. Knott says is impossible to understand.

In dealing with the cause of the variability in the position of the diaphragm in dead subjects I inferred that the diaphragm after death represented the phase of complete expiration. To that inference Dr. Knott apparently takes no exception, but my statement that "the elasticity of the lungs draws the diaphragm up as far as it will yield" appears to him "in the present state of physical and anatomical knowledge to read rather funny." "It is unnecessary," he proceeds, "of course, to point out that the lungs, or their elasticity, have no *direct* connexion with the diaphragm." Thereupon Dr. Knott makes certain observations on the standard of physiological knowledge he would require of tyros and rapidly becomes mathematical. Now when a man, in dealing with some simple problem in physiology or natural history, becomes mathematical it will be found that, in nine cases out of ten, he is trying to prove the existence of something that is not, and to this rule my critic is no exception. I need not quote for Dr. Knott that the elasticity of the lungs after death, if modern text-books on physiology are trustworthy, is enough to support a column of mercury from two to five millimetres high; I would rather beg him to leave his study chair for the post mortem room and to verify certain experiments which I have carried out there for his benefit. The experiments are designed to show that the elasticity of the lungs have a great deal to do with the position of the diaphragm. In five subjects varying in age from six months to 52 years the trachea was connected with a manometer. In each case there were no pleuritic adhesions. Three long hat-pins were inserted in a row perpendicular to the surface of the chest, one with its point buried in the viscera of the right dome, one in the left dome, and one in the middle inserted only in a costal cartilage, so as to serve as an index of the movements of the other two when the chest was opened. Dr. Knott knows as well as I do that the very partial collapse of the lung which follows an incision in the walls of the thorax was not due to atmospheric pressure, for on opening the chest the pressure is then the same on both surfaces of the lung, but is due entirely to its elasticity. The only factor annihilated by opening the chest is the elasticity of the lung. In the five cases I measured the elasticity varied from 0·5 to 3 Hg mm. As the lungs collapsed and their elastic traction disappeared the domes of the diaphragm and the abdominal viscera within them descended from two to five millimetres. The degree of descent roughly corresponds with the amount of pulmonary elasticity. Perhaps when Dr. Knott comes to repeat those experiments the idea of the elasticity of the lungs having something to do with the position of the diaphragm may strike him as less "funny" than it did.

My description of the diaphragm as a fan shaped digastric muscle, rising from the upper lumbar region of the spine and inserted on the abdominal ends of the lower six ribs appears to Dr. Knott a "preposterous" and "physico-metaphysical statement." The statement will strike him in quite a different sense when he becomes better acquainted with the origin, nature, structure, and action of the diaphragm. If he approves of the name "digastric" for the muscle which goes by that designation in the neck he cannot legitimately withhold it from the diaphragm, for in nature, in origin, in manner of developement and in action these two muscles correspond point for point.

I have tried to show Dr. Knott that "preposterous" is a dangerous word to employ; its use denotes ignorance more frequently than knowledge.

I am, Sirs, yours faithfully,

Feb. 16th, 1903. ARTHUR KEITH.

THE VIRCHOW MEMORIAL.

To the Editors of THE LANCET.

SIRS,—Allow me to inform your readers that the subscription list for the Virchow memorial will close at the end of the present month. So far, 97 subscribers have contributed £225 1s. 6*d*. Further contributions should be sent before Feb. 28th to the honorary treasurer of the Virchow Memorial, care of Messrs. Robarts, Lubbock, and Co., 15, Lombard-street, London, E.C.

I am, Sirs, yours faithfully,

FELIX SEMON,

Wimpole-street, W., Feb. 16th, 1903. Honorary Secretary.

A QUESTION IN INEBRIETY.

To the Editors of THE LANCET.

SIRS,—In our dealings with inebriates it is an interesting question for us to consider whether we have really to deal with a class of individuals whose will power is a weak or a strong feature of their minds. The accepted belief is that the inebriate is a weak-willed creature, but a good deal of experience of inebriates has led me to doubt that idea and rather to believe that which I consider to be a fact—i.e., that the inebriate is possessed of a will which over-rides the other faculties of his mind in so far at least as his appreciation of his moral obligations is concerned, and therefore that his will is the strongest feature in his mind.

From a psychological standpoint we may admit that when the will and the other faculties of the mind act in unison we have as the result a properly balanced intellect. In the inebriate we frequently observe these other faculties of the mind tending towards a high class of intellect, the latter form being, indeed, often fully revealed together with the tendency to inebriety. Should, however, those other faculties of the mind outrun the will to any great extent coördination of the whole is lost and the reasoning powers justify to the mind acts and conceptions which the will is unable to restrain within recognised proper bounds and those aberrations of intellect occur which cause eccentricity and lunacy. On the other hand, should the will override these other faculties of the mind the balance again becomes lost and the inebriate, the spendthrift, the fanatic *et hoc genus omne* stalk in. We hear constantly of the inebriate who is desirous of giving up drink but that "his will is too weak." It really is that his will is too strong; his will to drink entirely outstrips those other faculties of his mind which present to him his moral obligations not to drink, the result being that such individual's act is the outcome of a major force of will and not that of a minor quantity of it. It is in this light, therefore, that I consider that the inebriate is possessed of an unfortunately strong-willed temperament and not, as generally accepted, a weak-willed one. I would be glad of the views of some of your readers as to this heterodox opinion which I beg to submit to you.

I am, Sirs, yours faithfully,

Feb. 13th, 1903. C. E. MACNAMARA.

THE LARGE INTESTINE AS AN INTERMITTENT SYPHON.

To the Editors of THE LANCET.

SIRS,—The publication of my paper on this subject has aroused so much interest that I should like to solicit the coöperation of your readers in helping me with some side issues and I am encouraged to do so by the signal success that has followed a similar attempt.

In the notes which I added to the reprint of the article in the *Edinburgh Medical Journal* and again in the address an abstract of which appeared in THE LANCET of Feb. 7th, p. 374, I proved as far as could be done by reasoning that the longitudinal bands of the large intestine are normally in a state of continuous tonic contraction. But, having no facilities for observation, I wrote to Dr. T. G. Brodie, of the Examination Hall physiological laboratories, and requested him to look out for this phenomenon. I received his answer on Jan. 31st and his conclusion was expressed in these words: "I think there is no question whatever but that the longitudinal bands of the colon are tonically contracted."

This tonic contraction with its concurrent shortening would be quite enough to produce the rigidity necessary for syphon action, and it cannot be denied that the large intestine with its short ascending and long descending tube fulfils in other respects the conditions of a syphon.

One of my points was that, on completely filling the colon by injection from the cut ileum, the 20-inch transverse colon leaves its nine-inch bed and becomes elongated and tortuous; the same thing must happen in sigmoid obstruction. Thus the question arises: Is the V-shaped colon sometimes a post-mortem change? When a person is found dead in a sitting position, therefore, I should like the maker of the necropsy to notice whether the transverse colon has dropped from its usual site. If empty perhaps this could not be expected. Again, I have a suspicion that the constipation and colic of lead poisoning are due to paralysis of the longitudinal bands with the consequent elongation, kinking, and loss of rigidity of the bowel. This should not be very difficult to determine. Further, since I have shown that hydraulic power is a factor in the propulsion of the intestinal contents, I should like to know with what average force the stream from the ileum enters the cæcum.

I am, Sirs, yours faithfully,
R. W. LEFTWICH, M.D.

Buckingham-gate, S.W., Feb. 9th, 1903.

THE UNIVERSITY OF LONDON AND THE ENGLISH ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.

To the Editors of THE LANCET.

SIRS,—I would like to make a few remarks upon "Africander's" letter in THE LANCET of Feb. 7th, p. 399. He states that: "Hitherto the whole crux of the question has been taken to be not a matter of personal ability but of opportunity," and I quite agree with him. I contend that opportunity should exist in London, as in other university towns. It seems anomalous that out of 60 entries at a London hospital only four should contemplate taking a degree. I submit that out of the same number of students entering, say, at Edinburgh, a very much larger percentage would contemplate and, as a matter of fact, take the degree. Further, however judicial the mind of South Africa is in respect to the practitioner of medicine (a country by the bye just now perturbed by political and racial hatred), there is I submit a very great advantage in possessing a degree in the old country, and the opportunity to obtain the same in London would be forthcoming were the Royal Colleges to join the University for examination purposes under the Act of Parliament which contemplated the possible desirability of such a union.

I am, Sirs, yours faithfully,
FREDK. W. COLLINGWOOD.

Devonshire-street, W., Feb. 7th, 1903.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

Mr. Jonathan Hutchinson's Leprosy Tour.—The Jamsetjee Jejeebhoy Native Hospital in Bombay.—The Government Grant to the Pasteur Institute at Kasauli.—The Plague Epidemic.

THE advent of Mr. Hutchinson to the principal cities of India is announced by letters in the local papers. Besides asking for information and promising to attend meetings Mr. Hutchinson gives a *résumé* of his views upon leprosy. He holds that the disease is caused by a bacillus which gains access to the body through the stomach, that there is great danger in eating food directly from the hands of a leper, that in the majority of grown-up lepers the disease is caused by eating badly-cured fish, and that a long period is necessary before results will be observed. It remains to be seen how the profession in India will receive these opinions which many consider are advanced on very imperfect scientific data.

The public appeal for money in aid of the nursing establishment of the Jamsetjee Jejeebhoy Native Hospital in Bombay is accompanied by the announcement of an extraordinary condition of the nursing staff. Here we have the largest native hospital in Bombay of no less than 460 beds which are always full, with 15 wards totally unnursed and seven others only nursed during the day. There is no complaint about the buildings and the staff is for the most part drawn from the Indian Medical Service. Treatment can hardly be conducted with much satisfaction to the medical men and the patients are without one of the main advantages of a hospital. It is stated that the Bombay Government is prepared to assist to the extent of half the expenditure necessary.

The increase in the Government of India grant to the Pasteur Institute at Kasauli is not marked by excessive liberality. Hitherto Rs. 9500 have been contributed, but in future Rs. 12,000 have been promised. Considering that 119 European and 33 native military patients were treated last year and that if the institute had not been established a very much larger sum than the above would have been incurred in sending British soldiers to Paris, the apparent generosity is in reality a sharp stroke of business. The institute is dependent in part upon private subscriptions and is necessarily hampered in its work by uncertainty in income. As other scientific work than the treatment of rabies is conducted at this institute it is of the highest importance that its expenses should be completely covered and Rs. 20,000 at least should be the annual grant made from the Government of India alone.

Every week now records rapidly rising figures in the plague mortality throughout India. Last week 22,954 deaths were recorded, as compared with 19,231 for the previous seven days and with 11,445 for the corresponding week last year. In the Bombay Presidency 10,747 deaths were returned, in Bombay city 495, in the Madras Presidency 848, in the Bengal Presidency 3060, in Calcutta 76, in the United Provinces 2954, in the Punjab 2627, in the Central Provinces 850, in the Hyderabad State 446, and in Berar 596. For some extraordinary reason the Poona figures are not included in the published returns, but local papers show that it is raging in this town with extraordinary virulence, over 100 deaths occurring daily. The disease is still severe in Karachi and is also severe in Allahabad, Meerut, Benares, and Lucknow, while the Cawnpore district continues to suffer very badly. In Bombay city the rate of mortality is about 90 per 1000 per annum. In Calcutta the recrudescence is rapidly developing. Madras has shown some indigenous cases and other cases are reported from Simla.

The mass of poor humanity which assembled in Calcutta upon the large Maidan to be fed in celebration of the King's Coronation numbered probably 50,000. The wretched physique of the majority of these beggars was painfully evident and the collection offered many opportunities of seeing external diseased conditions. Skin diseases were very common, especially the different forms of parasitic origin, and numerous lepers moved amongst the crowd. Deformities, paralytic states, and conditions produced by chronic diseases such as malaria and elephantiasis were everywhere evident. The Hindu portion consisted largely of professional beggars. A few years ago such a gathering would have been condemned as conducive to the spread of plague, but subsequent knowledge has shown that a plague patient would be either too ill to go or not in a stage of contagion.

Jan. 30th.

LITERARY INTELLIGENCE.—The Scientific Press, Limited, announces the publication of a cheap edition, price 10*s.* 6*d.* net, of Dr. R. Sisley's work, "The London Water-Supply." Messrs. W. B. Saunders and Co. announce the immediate publication of two new volumes in "Saunders's Medical Hand Atlas Series"—viz., "Atlas and Epitome of Diseases of the Mouth, Pharynx, and Nose," by Dr. L. Grünwald of Munich, edited, with additions, by Dr. J. E. Newcomb; and "Atlas and Epitomeof Human Histology and Microscopical Anatomy," by Professor Dr. J. Sobotta of Würzburg, edited, with additions, by Dr. G. C. Huber. Messrs. Saunders and Co. have in preparation for early publication two new volumes in their English edition of Nothnagel's Practice—viz., "Diseases of the Pancreas, Suprarenal Capsules, and Liver," and "Diseases of the Stomach."—Mr. Henry Frowde announces the approaching publication by the Oxford University Press of Dr. A. J. Ewart's treatise on "The Physics and Physiology of Protoplasmic Steaming in Plants," of which an abstract was communicated to the Royal Society.

THE ORGANISATION OF THE PROFESSION.

(FROM OUR SPECIAL COMMISSIONER.)

(Continued from p. 490.)

The Swansea Single Men pay for Medical Attendance on the Wives and Children of the Married Men.—Figures demonstrate the Charitable Aspect of Club Practice.—Complaints against the Medical Officers.

IT has been seen that at Swansea the custom is that men only pay for medical aid. Their wives and children have to be attended without the member of the club or society being called upon to make any extra payment on their account. A member who has no wife or child pays the same subscription as the member who has a large family. This is a strange and unusual arrangement, but when viewed from the workmen's standpoint it has a beautiful, a poetical, and altruistic appearance. Are we not told, they say, to bear each other's burdens? and who can better afford to pay for the married man's family than the bachelor? In his turn, if a married man has only two children should he not contribute something for the man who has half a dozen children? With such principles there should be no decrease in the birth-rate, but the medical practitioner objects to these theories, however beautiful they may be, when they are not put into practice except at his expense. If the bachelors will pay for married men's children, well and good, but then they should pay and not merely talk about it. It is not an average of 6*s.* 6*d.* per member that will cover the cost of attending numerous families. But the workmen challenge these figures and have tried to demonstrate that the single men pay enough to make up for the acknowledged insufficiency of the payments effected by the married men. One case, for instance, is cited of a married man who pays 6*s.* a year to his lodge but has two unmarried sons who subscribe to two other societies, and altogether his household pays about £1 13*s.* 4*d.* per annum. It is obvious that no argument can be based on such a case as this. No one desires that any individual family should contribute too much, but what were the payments of this family before the children had grown up and what will happen when they marry? Again, the workmen say that they often belong to several societies and that they therefore pay for several medical men. This unsatisfactory state of affairs is not, however, desired by the members of the profession; they would wish that only one medical man should be engaged but that he should be properly remunerated. Besides, this simply means that the most popular medical man has the most work to do and does not get proportionate pay. Dr. John D. Davies has calculated that the medical profession is overworked at Swansea. He says that there are 44 practitioners in the town and this means, in round numbers, the population being 97,000, one practitioner for every 2000 persons. At Cardiff there are 113 practitioners and this is equal to one for every 1143 persons and at Newport there is one practitioner for every 1800 of the population. To make a decent living from club practice alone at the old Swansea rate of payment it would be necessary, Dr. Davies reckons, to see about 100 patients per day and this is not possible short of defrauding the patient and converting the practitioner into a mere machine.

Dr. T. D. Griffiths, who is to preside over the next meeting of the British Medical Association, is of opinion that there should be one medical practitioner for every 1100 persons. According to figures derived from the Order of Foresters the average number of members on the club funds at a time amounts to 3 per cent. of the total membership. So if there are 1100 members this means that there would be an average of 33 patients per day to attend. To do such work properly and including the time required to go from house to house it is not possible to see more than four patients per hour and this means 32 patients in a day of eight hours. But this calculation under-estimates the position, for it is based on the health of members of a friendly society—that is to say, of adult males—and it may well be estimated that for one member who requires medical attendance there are at least two women or children who are also ill. Dr. Griffiths makes, however, another calculation. He says if 100 members pay 4*s.* a year each this yields £20, or £6 13*s.* 4*d.* for each of the three members who are ill all the year round, and this amounts to 2*s.* 6*d.* per week for attending a patient. The chief registrar of friendly societies has based the sick pay to be allowed on calculations extending over some millions of members and he concludes that the average amount of sickness equals 12 days per annum per member. This confirms the previous estimate, for the 4*s.* annual subscription divided by the 12 days of sickness does amount to about 2*s.* 6*d.* per week for attending the patients. These figures are taken from the statistics of the friendly societies themselves.

Though the insufficiency of the pay is thus very clearly demonstrated the members of the friendly societies found it difficult to believe that their medical officers had good cause for dissatisfaction. Why, they urged, was such work accepted and why, when a vacancy occurred, were there so many applicants for the vacant post? At Swansea an answer was made, or was said to have been made, that greatly startled—not to say shocked—the members of the friendly societies. It has been admitted that some club medical officers merely gave value for value; in other words, they did not do as much for patients who, on an average, only paid from 3*d.* to 6*d.* per consultation as they did for those who paid 2*s.* 6*d.* This frank admission has caused quite a scandal. Some local leaders promptly replied that if this was the case they would dismiss all their medical officers, they would amalgamate all their clubs, and found a large medical institute, where they would employ their own medical officers who should be entirely at their service. Furthermore, they would buy their own drugs and thus insure that they should be of the best quality. A lengthy circular was issued to this effect. It states, among other things:—

> That the grievance is that under existing conditions club patients do not get the proper attendance and medicine which they have a right to expect. In saying this we only state what is a well-known fact to most friendly society members. How often do we hear the complaint from our members as to the indifference and inattention of doctors to club patients. Is it infrequent that we hear of members protesting that, rather than go to a club doctor, to whom they pay their contributions ungrudgingly, they go to another and pay him fees which in many cases they can ill afford to pay? Why, these complaints have become so common that the name of club doctor is a reproach among the members.

This is an important statement and perhaps was considered by its author as an attack against the medical profession, but it, on the contrary, confirms the arguments so frequently brought forward in these columns. The circular containing the above passage is addressed to the friendly societies and the opening paragraph explains that—

> In pursuance of a resolution passed at a general meeting of delegates representing the various branches of the friendly societies of Swansea and district, held at the lodge room of the Bird-in-Hand Hotel, High-street, on Friday evening, Nov. 28th, we beg to submit the following for your consideration.

The circular is therefore and in its way an official document and it distinctly proclaims what has always been urged in these columns that club practice must inevitably tend to degrade the profession. Undoubtedly, patients do not always obtain proper attendance and medicine, but they have only the "right" to expect this on one of two conditions. They must pay for it or else they must be considered fit and proper subjects for the receipt of charity. But the members of the friendly societies seek to avoid both these issues; they do not subscribe enough to constitute a payment and yet they are very indignant when told that they are in receipt of charity. Nevertheless, the fact remains that whenever a club patient is properly attended he is in receipt of charity, but as medical men cannot spend all their lives and substance in works of charity the complaints made in the circular are sometimes based on fact.

Dr. Griffiths has explained that when he first commenced to practise at Swansea he took a club and its members paid him 5*s.* a year. He contracted with a druggist to dispense for him at the average charge of 6*d.* per bottle of medicine and 2*d.* per box of pills. At the end of his first year Dr. Griffiths found that his drug bill exceeded by £11 the amount he had received from the club. Was not this charity to the amount of £11 in cash and all the labour of attending the patients? The practical upshot is that to make the 5*s.* subscription yield some small remuneration the drug bill must be reduced from an average of 6*d.* to about 1*d.* per bottle. This club met at the "Adam and Eve" in High-street and Dr. Griffiths promptly resigned his position as their medical officer. He then received a deputation from a club that met at the "Bird-in-Hand" and had about

500 members. He carefully studied the figures they submitted to him as to the number of members and their families he would have to attend and found that the remuneration offered was equal to 1½*d.* for each attendance. Therefore, if he resigned himself to spending a large portion of his time in dispensing his own medicines and resorted to expedients necessary so as to reduce the average cost of the medicines to 1*d.* per bottle, he would receive a net profit of ½*d.* for each attendance in payment for his skill and knowledge as a physician and also as a dispenser. Yet the men who made Dr. Griffiths this munificent offer would deny that they were asking for charity. Dr. Griffiths has consequently and publicly proclaimed that he preferred to give up the clubs. He has urged that no respectable man could accept such conditions and that if those who did accept such terms resorted to disreputable practices the primary blame rested with the clubs which sought to sweat the profession. As the subscriptions were insufficient to remunerate the medical officer, it would not be surprising if various stratagems were invented to induce the members to order or to purchase some special drug or in some other way to incur an outlay not comprised in the terms of the contract. The tendency to push the sale of such extras was inevitable so long as the medical officers were not properly remunerated.

Under such conditions the complaints made in the passage of the circular quoted above are only just what might be expected, but in thus complaining the circular unwittingly acknowledges that the medical officers could be properly remunerated. There has never been any objection to attending the genuinely poor for little or nothing. The objection is against giving what practically amounts to medical charity to those who can afford to pay; and here we find it acknowledged that the members of the friendly societies not infrequently go to a private practitioner and pay him fees which "in many cases they can ill afford." Therefore the members of the friendly societies can pay the ordinary fees, since it is here publicly admitted that they do pay the ordinary fees. This we are told they can ill afford in many cases; therefore they can afford to pay the proper fee in some cases. Why, then, do they attempt to avoid doing so? Have we not in this sentence an official acknowledgment made and indorsed by the friendly societies themselves that the complaint of the medical profession is well founded? that there is abuse in the club system and that there are members who can afford to pay the usual fee and who have therefore no right to claim the semi-charity, if not the absolute charity, associated with the system of contract work?

Nevertheless and immediately after this admission that abuse does exist the circular goes on to quote a letter written to the medical journals by the Registrar of Friendly Societies, saying:—

> Do the friendly societies ask for medical relief as a charity? or do they wish to sweat the medical profession, or are they willing to pay a fair price for the services rendered to them by it. I know them well enough to answer the question without hesitation. They desire to pay a fair price for the services rendered to them. They are neither beggars or sweaters.

The circular commenting on this letter states:—

> The friendly societies have always been willing to pay a fair price, but if the price has not been satisfactory to the medical profession in Swansea then they themselves are to blame. The present low rates are due to the undercutting that has been going on amongst themselves for some years past. In spite, however, of these rates, which they consider to be low, we know that when a vacancy for a medical officer occurs in a branch that the competition for the vacancy is very keen, and the methods resorted to in order to obtain the office are not, in all cases, such as add to the dignity of the medical profession.

This, again, confirms much of what has been said in the course of this series of articles. Many a time have the "undercutting" tendencies of certain practitioners been denounced. It is to prevent such practices that the organisation of medical unions throughout the country is advocated. As a result of this movement the competition for vacancies in club practice is now not so keen as it was some years ago. Indeed, there are cases where it has been impossible to obtain any medical officer to fill a vacant post. Some of the insurance companies which organised medical aid in the same manner as the friendly societies have now abandoned this phase of their business. There can be no doubt that progress has been achieved within the last five or six years. Still there are weak-kneed members of the profession. At the joint meeting of medical representatives and the delegates of the friendly societies at Swansea Mr. Lake, secretary of the latter organisations, is, according to the shorthand notes taken at the time, reported to have declared that some medical officer had said to the members of the societies, "Never mind, we understand each other, do not trouble," and another said, "I will give you back so much if this increase comes about." At this there were loud cries of "Name," but Mr. Lake replied, "No, it is enough for me to say I was in the lodge when the offer was made." It is not surprising if some of the workmen are still under the impression that they pay a sufficient subscription to medical officers of their clubs. Then when they find that they are not attended to with sufficient care or if they suspect the quality of the medicine given they complain that they are being robbed right and left, and that though they subscribe to a club medical officer they are constantly compelled to seek the advice of a private practitioner. There is in this a rough justice which it would be to the material advantage of the friendly societies to take into more serious consideration. If such complaints are well founded—and it is generally admitted that there is some truth in them—what would be the consequence? Simply that patients would remain longer on the sick list and therefore draw larger sums as sick allowance. Consequently the drain on the societies' funds for sick pay is likely to exceed the sum necessary to remunerate sufficiently their medical officer. The attitude of the friendly societies is that they give insufficient remuneration to their medical officers and trust that, in defence of the honour of their profession, the medical officers will nevertheless give back in exchange sufficient and efficient attendance and medicine. It sometimes happens, however, that the medical officer adopts the commercial rather than the professional point of view and therefore returns tit for tat and only gives his patients their money's worth. Then there are sounds of lamentation, the medical officer's behaviour is denounced as most scandalous, and the friendly societies make big threats of discharging all the medical officers and founding a medical institute solely under the control of the friendly societies.

(To be continued.)

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Royal Southern Hospital: Grave Financial Situation.

THE sixty-first annual report of the working of the Royal Southern Hospital states that the balance due to the bank had now reached the high figure of £5601. The number of patients treated during the year was 13,355, of which 2431 were in-patients; the number of attendances was 47,103, making a total of 60,458 and showing a considerable increase on previous years. The services of the horse ambulance were called for in 458 emergencies. The average number of beds occupied was 192. The number of cases in the tropical diseases ward was 137, as compared with 131 last year. Dr. W. Permewan, in seconding a vote of thanks to the Lord Mayor for presiding at the annual meeting, said that the time would come before long when the city would not only feel it its duty but its plain interest to keep up and to maintain an efficient system of hospitals. It was now, by a recent decision of the Local Government Board, within the power of the corporation to establish and to maintain a hospital for any purpose and not only for the treatment of infectious diseases, as was generally supposed. The Lord Mayor, in replying to the vote of thanks, endorsed Dr. Permewan's remarks on corporation hospital management and said that the time would probably come when some of the hospitals would be taken over by the city and placed entirely on the rates. His lordship suggested that probably those responsible for the administrative departments of the several hospitals of the city might learn something from each other by conferring upon the best methods of reducing the cost per head of the patients in the hospitals. In the Royal Southern Hospital the cost per head was under £50 per annum.

Small-pox in Liverpool: Slight Abatement in the Number of Reported Cases: the Tramp Nuisance.

There were 306 patients suffering from small-pox in the corporation hospitals on Feb. 12th. Only 45 fresh cases were reported during the week, as against 131 during the previous week. The spread of the disease is largely due in

Liverpool to tramps. Dr. E. W. Hope, the medical officer of health, is of the opinion that they leave a trail of disease behind them. There is a class of idle loafers who alternate between the gaol and the tramp sheds of the workhouses and wherever they go they are a nuisance. A letter from the Local Government Board bearing on this subject will shortly be laid before the health committee. Nothing has been more clearly proved than that the dissemination of small-pox has been very largely owing to tramps. Stringent measures have been taken to deal with them in Liverpool. More drastic measures generally in dealing with this class of pest (in Dr. Hope's opinion) would prevent a great many outbreaks of the disease.

The Liverpool Cancer Research Fund in connexion with University College and the Royal Infirmary.

The director of the Liverpool Cancer Research (Sutton Timmis) Fund, Dr. A. S. F. Grünbaum, has issued a circular letter to the local members of the medical profession in which he states that the objects of the foundation are (1) to investigate the biology and chemistry of the disease; (2) to attempt the production of curative remedies; (3) to discover, if possible, means for the prevention of the occurrence and spread of the disease; and (4) to investigate, experimentally and otherwise, the questions of etiology relating to heredity, locality, occupation, &c. Dr. Grünbaum appeals to his professional brethren to give him the opportunity of obtaining fresh specimens of malignant tumours when occasion presents itself.

Feb. 17th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The New Professor of Anatomy in the University of Edinburgh.

THE curators of patronage of the University of Edinburgh met last week for the purpose of considering the vacancy in the chair of anatomy created by the promotion of Sir William Turner to be Principal. The curators having learned that Dr. D. J. Cunningham, professor of anatomy in Trinity College, Dublin, was willing to accept the Edinburgh chair, unanimously decided that in view of his pre-eminent qualifications it was unnecessary to consider other applications and that he should be invited to succeed Sir William Turner. The appointment of Professor Cunningham had been anticipated, so that the intimation did not cause any surprise. The manner in which the appointment has been made may well be highly gratifying to Professor Cunningham. I do not remember any other appointment to a medical chair being made in this way. Professor Cunningham will be warmly welcomed back to Edinburgh, where many men who knew him in student days now occupy prominent positions. Professor Cunningham graduated in medicine at the University of Edinburgh in 1874 with first-class honours. Two years later he took the degree of M.D., receiving a gold medal for his thesis on the Anatomy of the Cetacea. In 1876 he became senior demonstrator of anatomy in the university under Sir William (then Dr.) Turner and this position he held for six years, when he received his appointment at Dublin. Professor Cunningham has been a fruitful contributor to anatomical science and his scientific attainments have been recognised by the conferring upon him of honorary degrees by the Universities of Dublin, Oxford, Glasgow, and St. Andrews.

Carnegie Trust Scheme for Post-Graduate Study and Research.

The executive committee of this trust has published its regulations for scholarships, fellowships, and grants. The scholarships are intended to afford promising graduates an opportunity of training and proving their powers in higher study and research, and may in this way qualify scholars for fellowships. Each scholar is selected by the trustees on nomination by a professor or lecturer, but the trustees in considering a nomination may include the opinions of others also who are acquainted with his qualifications. The scholarships are to be of the value of £100 per annum and may be held for two years. During the tenure of the scholarship no other scholarship can be held, but in the case of such a scholarship being held the trustees may supplement it so as to bring it up to £100 per annum. No position of emolument can be held with a scholarship except with the sanction of the executive committee. Ordinarily a scholar is expected to devote his whole time to the purpose for which the scholarship is awarded. The scholar has to work under the supervision of the professor or lecturer who nominates him. The fellowships are for graduates who have already, preferably by work published, shown their capability of advancing science or medicine and who desire to devote themselves further to this work. These are of the annual value of £150, exclusive of such special expenses in connexion with a research as the executive committee may allow. Here, also, no other fellowship or position of emolument is allowed save on the same terms as mentioned above as applicable to the scholars. The fellowships may be held for three years if the executive committee decide so to extend them. Finally, the committee will consider applications for grants in aid of research. These are open to professors, lecturers, and assistants in Scottish universities, any teacher in Scotland recognised for the purpose of graduation in a Scottish university, or a Scottish university graduate resident in Scotland. The applicant must submit evidence of his experience in research, the nature of the proposed research, the time it will take, and the estimated cost. The executive committee of the Carnegie trust is again to be congratulated on its statesman-like grasp of this difficult question and on the very admirable nature of the arrangements it has made. The young men in Scotland seem to me to be given an enviable opportunity of showing their interest in, and capacity for, original work. The scheme conserves, as it was bound to do, the interest of university graduates while allowing considerable choice as to the laboratory in which research can be pursued.

Feb. 17th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Zymotic Health of Dublin.

AT the last meeting of the managing committee of Cork-street Fever Hospital, the registrar reported that the number of recent admissions was unusually high. There was a local outbreak of typhus fever in the city which resulted in the admission of many cases of that disease, while many patients with scarlet fever and others with diphtheria of a severe type were received during the two weeks ending on Feb. 12th.

County Monaghan Infirmary.

From the statement of accounts for the year ending Jan. 5th, 1903, it appears that there is a balance of £496 12*s.* 3*d.* to the credit of this institution. There is an increase of £200 as compared with the previous year. The Local Government Board has instructed one of its medical inspectors to visit the infirmary and to report as to its recognition as a school for the training of medical and surgical nurses.

The Ulster Medical Society.

The President of the Ulster Medical Society (Dr. John Campbell) entertained the members of that association at a smoking concert in the Medical Institute, Belfast, on Feb. 12th, when there was a large attendance. Refreshments were served at one end of the main lecture hall and during the evening an admirable programme of recitations and musical (vocal and instrumental) items were given. The concert was in every respect a great success.

The Samaritan Hospital, Belfast.

At the annual meeting of the supporters of the Belfast Samaritan Hospital held on Feb. 16th it was reported that during the past year 536 extern and 149 intern patients were treated. Of the latter 115 required surgical aid. There were 25 major operations. Owing to loss of subscriptions the income is less than last year, so that there is a balance due to the bank of £250. Owing to a case of typhoid fever occurring among the nursing staff it was decided to overhaul the drains after the patient's recovery; this was done at great expense and practically led to a closing of the wards for the last quarter of the year. To put the finances in a satisfactory condition 100 additional subscribers of £1 and 50 additional ones of 10*s.* are needed. It is hoped in the interests of this excellent institution that this financial help will be secured.

Feb. 17th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Alcohol Question.

THE alcohol question is being fought out with vigour on both sides. The Distillers and Alcohol Sellers' Union, not content with having brought an action against the Prefect of the Seine and the Director of the Assistance Publique for having placarded Paris with anti-alcohol notices signed in their joint names, has now had a meeting of its members. These members have determined to placard every town in France with a counterblast to the effect that alcohol is not a poison but a useful food, giving as their authority M. Duclaux, whose opinion I quoted in THE LANCET of Feb. 7th. At the meeting of the Academy of Medicine which was held on Feb. 3rd M. Laborde said that he wished to protest in the strongest fashion against the opinion of M. Duclaux. Alcohol, said M. Laborde, is not a food—it is a drug, one which stimulates for a moment but which exacts a heavy payment afterwards. But it is above all things a poison, slow and perfidious it may be in action, but nevertheless sure and far reaching in its effects, for these effects extend even to the progeny of the drinker. As for arguing that the common sense of the people will prevent them from abusing alcohol, such argument was a dangerous illusion. After listening to M. Laborde's burning words the Academy heard other speakers who wished some modifications to be made in the report read by M. Laborde at the previous meeting of the Academy. This report, which grew out of a Parliamentary question,[1] dealt with the sale of alcoholic drinks containing essential oils. These liquors were to be divided into two classes. Those in the one class were absolutely prohibited and such were liquors containing the natural or synthetic essences of absinthe, star anise (*badiane*), bitter almonds, and the like. The other class contained liquors which were only to be sold under the most stringent regulations and included those containing essence of mint, melissa, arnica, nutmeg, sandal wood, sage, and others, including the residual alkaloids of cinchona. M. Hanriot thought that the chief point to be observed was that the alcohol should be pure. Alcohol, he argued, is the substratum of all alcoholic drinks and the flavouring essence simply added its poisonous quality. The higher alcohols should be absolutely forbidden because of their poisonous qualities. Methylic alcohol only existed in a liquor as an impurity or an adulterant and therefore all liquors containing it ought to be rejected. The various flavouring agents should be dealt with individually according to their various grades of toxicity. Essence of bitter almonds was only moderately poisonous and it would be therefore better not to proscribe it absolutely for fear of driving drinkers to consume other and more poisonous essences. M. Hanriot proposed that the manufacture and sale of every liquor containing essence of absinthe or hydrocyanic acid in a greater proportion than that of a decigramme to a litre should be absolutely forbidden. M. Daremberg said that essence of anise being more poisonous than essence of star anise should be prohibited. Essence of juniper was not poisonous. M. Bouchard thought that the essences of anise, of star anise, and of fennel should all be put in the same class. The manufacturers purify these by crystallisation and obtain a product which contains 90 per cent. of anethol. The forbidding of the sale of essence of absinthe was an illusory precaution, for the absinthine contained therein could be obtained from other essences. M. Raymond gave some statistics of 2000 patients observed by him in the Salpêtrière during the year 1902 to 1903. Of these patients, both men and women, 66 per cent. were alcoholics. Of the whole number 10 per cent. were markedly alcoholic and bore evident signs of intoxication. Alcohol favoured the development of both tabes dorsalis and epilepsy. M. Raymond quoted the case of a woman in whom epilepsy developed in a very marked manner after absinthe poisoning and of another who exhibited a polyneuritis after intoxication by *eau de mélisse*.

The Funded Property of the General Association of French Medical Men.

There is at present great excitement among the members of the council of the above-mentioned association. This benevolent society possesses considerable funded property which in accordance with the law is invested in a public institution called the "Caisse des Dépôts et Consignations," which pays out interest on the money. Out of this interest are paid pensions to those members of the association who have fallen on evil days or to their widows. By a law dated April 1st, 1898, the rate of interest was fixed at 3½ per cent., but by special arrangement it may be as much as 4½ per cent. The director of the Caisse des Dépôts et Consignations has, however, just transferred the capital of the association to a different schedule by which the interest allowed is only at the rate of 1½ per cent. This stroke of business, which at once reduces the resources of the association by some two-thirds, has naturally enough brought about vigorous opposition from the council. A deputation has been appointed to wait on the Minister of the Interior who is himself much surprised at the arbitrary action of the director of the Caisse. The Minister himself wrote a letter to this official who, however, refused to modify his decision, alleging that his action was in accordance with instructions received from his council. The association has therefore brought an action against the director so that the matter will be submitted for judgment to the Conseil d'État. The association is besides in trouble in other ways. The general secretary of the association, M. Lereboullet, and Dr. Lande have together formulated the idea of publishing a great medical journal, the expenses to be paid by the association and the journal to be distributed gratuitously to all its members. As these members include nearly half of the whole of the medical profession this idea if carried out would mean the stopping of practically the whole of the rest of the medical press of France. The syndicate of the medical press has therefore held an extraordinary meeting and has decided that if the association should carry out its idea an action should be brought against it for having violated the first article of the law dealing with friendly societies, which states that such societies should not engage in any commercial transaction. The association hopes to pay the expenses of its journal by money received for advertisements which would constitute a commercial transaction.

The Waters of Luchon.

At the meeting of the Academy of Medicine held on Feb. 3rd M. Moissan stated that from an examination of the Grotto spring at Luchon he was able to affirm that the sulphur in the water at the springhead was in the form of sodium monosulphide. In the inhalation rooms, however, the sulphur existed as sulphur vapourised at a temperature of 50° C. and not as sulphuretted hydrogen. Moreover, the staff of the inhalation rooms who work there for some six months of the year never show any of the symptoms which even slight doses of sulphuretted hydrogen bring about. M. Berthelot agreed with M. Moissan and said that sulphur gives off no vapours at ordinary temperatures, but at a temperature of 50° C. the vapour has a sensible tension. If the water is at a higher temperature it holds the sulphur which will settle out on cooling as sulphur. Workers in vineyards who sulphur the vines know well that sulphured vines give off sulphur vapours under a hot sun. M. Armand Gautier added that sulphur waters introduce sulphur into the economy in some way not at all clearly understood. He had experimented upon himself and had been unable to detect either sulphuretted hydrogen or sulphur on his skin after a bath.

The Treatment of Incurable Cases of Tuberculosis.

An interesting experiment is about to be made on behalf of incurable cases of tuberculosis. The council of the Assistance Publique has decided to set on foot a special department, annexed to a Paris hospital for the care of advanced cases of tuberculosis. The Pitié Hospital is the one selected and the cases will be placed in charge of M. Robin. M. Mesureur, the director of the Assistance Publique, is arranging with the director of the hospital as to a site for the wards for tuberculosis. The wards will contain 26 beds.

Feb. 17th.

[1] THE LANCET, July 15th, 1902, p. 49.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Specialism in Medicine and Surgery.

PARAGRAPHS have recently appeared in the newspapers to the effect that the Government intends to introduce legislation relative to medical and surgical specialists, and it has been definitely stated that not long ago, at a meeting of the Prussian medical chambers, Dr. Kirchner, a member of the Government medical department, announced that a Bill

would be brought in requiring an additional examination to be passed by those medical men who desired to have the title of specialist granted to them. The news caused some surprise and the project was from the first regarded by the medical profession with disapproval. It was argued that in the event of an additional qualification for specialists being made compulsory only those medical men would be admitted to the examination who had worked in a public clinic such as that of a university and that the necessary certificates for the examination would be obtainable only from such clinics. It is well known that many specialists, including some of the most competent, have begun to work in their special branch after having been engaged in general practice; others have received their training either in private clinics or by becoming assistants to established specialists, or by attending lectures and courses of instruction either in Germany or elsewhere. It is true that this system has occasionally led to abuses, for some medical men have been known to put themselves forward as specialists after having attended courses of instruction in their particular branch for only a few weeks. These worthies, who were familiarly known in the profession as "six weeks' specialists," hardly ever prospered in their new departure, and either very soon returned to general practice or else endeavoured to extend their knowledge by further study. This abuse has not, however, at any time attained proportions sufficient to justify such a radical measure as compelling specialists to take an additional qualification, and the unanimous disapproval of the medical profession has apparently had the effect of influencing the Government, for the semi-official journals declare that Dr. Kirchner's words have been misunderstood and that the Government has no present intention of creating a new qualification for specialists. It is furthermore pointed out that the regulations affecting medical qualifications are controlled by the Federal Council and are the same throughout the empire, for which reason an individual state like Prussia could have no power to alter these regulations without the consent of the Imperial authorities. The *Berliner Aerzte-Correspondenz* announces that it is authorised to deny all the current rumours relative to the alleged project—a turn of affairs which will commend itself to those who disapprove of too much Government interference in medical questions.

Health of the Army.

According to a report issued by the Army Medical Department and quoted by the *Deutsche Medicinische Wochenschrift* the invaliding during the period from Oct. 1st, 1898, to Sept. 30th, 1899, was 355,446 out of an effective force of 514,569 men, or a proportion of 690·3 per 1000, as compared with 682·5 per 1000 during the previous twelve months. The mortality continues to decrease, being only 2·1 per 1000 during the period in question, whereas the average for the period from 1881 to 1886 was 4·1 per 1000. Of the men invalided during the twelve months 1898–99 the proportion who returned to duty was 924·1 per 1000; 783, or 2·1 per 1000, died, of whom 13, or 0·04 per 1000, committed suicide; and 6661 were discharged as unfit for service. In about one-third of all the cases the causes of complete invaliding were diseases of the respiratory organs. About 1600 men were sent for treatment at spas and watering-places at the public expense. Infectious diseases showed a relatively considerable increase—namely, 34·6 per 1000, as compared with 24·3 per 1000 in the previous twelve-month. This increase was principally due to the prevalence of influenza; enteric fever, diphtheria, venereal diseases, and tuberculosis, on the other hand, showed a diminution. The report, which is very comprehensive as well as instructive, deals also with the military hospitals. In five garrisons new hospitals were established and in seven the existing buildings were enlarged and improved. Several hospitals have been provided with new operating-rooms and supplied with apparatus for Roentgen ray work and for the application of mechanical movements in medical treatment. With respect to food, it is mentioned that trials which had been made of frozen meat had been very successful; it could be conveyed long distances in the height of summer without sustaining damage.

The Battle of the Clubs.

Some alterations are to be made in the laws relative to the workmen's clubs which insure against sickness. According to a Bill which is at present under discussion by the Federal Council the sick clubs will have to support their members for 26 weeks instead of for 13 weeks, as required by the existing law, and women will have to be supported for six weeks after confinement instead of for four weeks as at present. It is also a great improvement that the objectionable exclusion from the benefits of the club which is at present imposed on members suffering from venereal diseases will be abolished and that these members will be entitled to the same rights as any other patients. The Bill, however, does not contain any provision relative either to the insurance of the families of members or to the position of the medical officers of the clubs. Considering the immediate interest of the medical profession in questions connected with these clubs it is remarkable that the official representatives of the profession have not been consulted in any way. The precarious position of medical officers to sick clubs is only too well known, but if proof is needed it can be supplied by the events leading up to the medical strike which is now in progress at Gera, a manufacturing town about 35 miles from Leipsic. Some years ago medical strikes were not very uncommon in Germany[1] and they have, in fact, ceased to be regarded as sensational, so that the daily newspapers which formerly published long telegrams from Leipsic with details of the strike which took place there now make very little reference to the strike at Gera. There is a sick club in that town and the cause of the present dispute was that the committee of the club, contrary to a previous agreement, appointed a so-called "Naturarzt"—i.e., a hydropathist—without regarding the wishes of the other medical officers whose income was affected by the high fees of the "Naturarzt." Of the 33 medical officers 28 at once went on strike and were aided by other medical unions, especially by the Leipziger Verband. This union, consisting of medical men engaged in club practice throughout Germany, was founded after the strike at Leipsic and has collected a considerable fund for the purpose of supporting medical men who had come into difficulties with a club. The Leipziger Verband inserted advertisements in all the leading newspapers, medical and non-medical, warning medical men against accepting appointments in Gera, and it is reported that in consequence of the steps taken by the union the club finds itself unable to procure medical officers even at higher salaries than before. There is thus reason to hope that the movement will be successful and that the medical officers will compel attention to their remonstrances.

Feb. 16th.

SWITZERLAND.

(FROM OUR OWN CORRESPONDENT.)

Treatment of Cholelithiasis.

CONSIDERABLE interest has of late been aroused in Switzerland in connexion with the results of new methods of dealing with cholelithiasis introduced by Dr. Robert Blaser of Muri, canton Aargau. He has published reports of about 100 cases treated with such great success that he can describe 79 cases as cured, and this restoration to health, according to his statistics, seems to have continued for at least one year. 16 cases were improved and six were unimproved. He treated 73 women and 27 men, and diagnosed cholecystitis 39 times, sudden impermeability of the common bile-duct 13 times, and chronic impermeability of it 43 times. He does not consider patients to be cured till they can take ordinary food of a light description. He recommends that cases of gall-stone should be treated medicinally, if possible, for from four to six weeks in a sanatorium and then at home for a couple of months, and he maintains that by this system they will often be spared the necessity of a course of treatment at Carlsbad and operative interference. He is of opinion that his treatment increases the amount of biliary salts and the total amount of bile and that it dissolves cholesterin, therefore slowly dissolving gall-stones and acting in a directly curative manner. He has, after an experience extending over a period of 12 years, combined the following remedies: hydrargyrum in small doses (not more than one-sixth of a grain per diem), podophyllin, oil of peppermint, melissa, and aniseed. In cases of acute biliary colic a bandage soaked with a mixture of poppy-seed oil and chloroform always gave immediate relief, so that he never had to resort to morphine injections. It is most desirable that the patients should be under careful medical supervision at a sanatorium for at least one month, so as to be free from work and worry.

[1] THE LANCET, April 27th, 1901, p. 1242.

He insists (1) on frequent deep inspirations to increase the flow of bile and to improve the circulation; and (2) on plenty of fresh air with a maximum amount of exercise. He gives his patients a mixed dietary with meat and vegetables, avoids raw fruit and some sorts of fish, such as salmon, and especially insists on careful mastication and slow eating. He orders saline baths containing carbon dioxide, as at Nauheim. He considers cholelithiasis to be primarily a nervous disease—a disorder of the branches passing from the vagus and sympathetic to the liver. The bile is thereby rendered abnormal, cholesterin is formed, the bile becomes infected, catarrh ensues, bilirubin is excreted, a calculus either partially or totally hinders the exit of the bile from the gall-bladder, and local hyperæsthesia becomes established. It may not be possible to follow Dr. Blaser in all these hypotheses, but his practical results are such that many medical men will probably be disposed to try this new method of treatment before recommending surgical intervention for their patients suffering from biliary colic.

Zürich, Feb. 16th.

Obituary.

JOHN ORTON, M.R.C.S. ENG., L.S.A.

MR. JOHN ORTON, who died recently at his residence, Foleshill, near Coventry, was one of the best known medical practitioners in North Warwickshire. His professional training was received at the Birmingham General Hospital and in 1867 he took the diploma of M.R.C.S. Eng.; in the following year he was admitted L.S.A. He then settled in Foleshill, where his father had previously been in practice, and in course of time he obtained several local appointments, such as those of medical officer of health of Foleshill rural district, medical officer of a Poor-law district, and workhouse medical officer. For several years Mr. Orton took an active interest in political questions. He had been in failing health for a considerable period and at the time of his death he was in his fifty-ninth year. He has left three sons and a daughter, one of his sons being Dr. John O. Orton of Foleshill. Mr. Edward W. Orton, M.R.C.S. Eng., of Bedworth, also in Warwickshire, is a brother of the deceased.

Medical News.

UNIVERSITY OF LONDON.—At the Intermediate Examination in Medicine, held in January, the following candidates were successful:—

Entire Examination.

First Division.—Thomas Charles Clare, Birmingham University; Colin Clarke, St. Bartholomew's Hospital; Arthur Donald Griffith, King's College; George Stanley Morse, St. Bartholomew's Hospital; John Morgan O'Meara, University College; Wilfrid James H. Pinniger, University College, Bristol; Lilian Trousdale Rowland, London (Royal Free Hospital) School of Medicine for Women; Albert Salmon, London Hospital; and Rawdon Augustus Veale, Yorkshire College.

Second Division.—Eustace Henry Adams, Guy's Hospital; Wilfrid G. Attenborough, King's College; John Stanley Avery, University College, Bristol; Thomas Henry Barton and Richard John Bentley, Guy's Hospital; Valentine Henry Blake, St. George's Hospital; Herbert D. Clementi-Smith, St. Bartholomew's Hospital; David Kirkpatrick Coutts, St. Thomas's Hospital; Claude Harold Cross, St. Bartholomew's Hospital; Ivor Jones Davies, University College, Cardiff; Arthur Sydney Hahn, University College, Sheffield; George Hamilton and Edward Montague Harrison, Guy's Hospital; Hyman Isaacs, University College, Cardiff; Herbert Stanley Knight and Edward Farminer Milton, Guy's Hospital; Conwy Llewellyn Morgan, St. Thomas's Hospital; Theodore Charles Pocock, Guy's Hospital; Norman Bennett Powell, St. Bartholomew's Hospital; William Percy Purdom, Guy's Hospital; Ellis James Roberts and Ernest Littleton Sandiland, London Hospital; Frederick Augustus Sharpe, Guy's Hospital; Olive Bertha Smith, London (Royal Free Hospital) School of Medicine for Women; Edward John Sunnucks, University College; Archibald Alfred Sutcliff, St. Thomas's Hospital; Violet Ackroyd Turkhud, London (Royal Free Hospital) School of Medicine for Women; Herbert Andrew Watney, Guy's Hospital; Arthur George Wells, University College, and Frank T. H. Wood, B.Sc., Guy's Hospital.

Excluding Physiology.

First Division.—Mary O'Brien, London (Royal Free Hospital) School of Medicine for Women.

Second Division.—Alec Barber, St. Bartholomew's Hospital; Henry H. Rudolf Bayley, Charing Cross Hospital; Lidbrooke Frank Cope, St. George's Hospital; Edward Vincent Dunkley, St. Thomas's Hospital; Alexander Harold Gifford, King's College; Llewelyn Llewelyn, London Hospital; Bessie Weldon Symington, London (Royal Free Hospital) School of Medicine for Women; Alfred Geddes Tressider, London Hospital; Ruth Helen Western, London (Royal Free Hospital) School of Medicine for Women; and David Wilson, St. Thomas's Hospital.

Physiology only.

Second Division.—Leonard Christopher Blackstone, University College; Isaac Reginald Cook, Guy's Hospital; Reginald John Hands Cox and John Harmer Drew, St. Thomas's Hospital; Guy Stanley Earl, St. George's Hospital; Harold Oscar Gough, University College, Bristol; Alfred Wyatt Hooker, St. Thomas's Hospital; Frank Douglas Roberts, London Hospital; and Harold Sugden Vivian, Middlesex Hospital.

N.B.—The foregoing list, published for the convenience of candidates, is provisional only and is not final until the report of the examiners shall have been confirmed by the Senate.

UNIVERSITY OF CAMBRIDGE.—At the Congregation on Feb. 12th the following medical degrees were conferred:—

M.B.—H. C. Williams, Pembroke; E. B. Leech, Christ's; and A. F. Elliott, Emmanuel.

B.C.—H. Davies-Colley, Trinity; and T. StC. Smith, Trinity Hall.

The Rev. E. S. Roberts, for many years Tutor of Gonville and Caius College, was elected Master on Feb. 16th, in the room of the late Dr. Ferrers.

TRINITY COLLEGE, DUBLIN.—At examinations held recently the following candidates were successful:—

Final Examination in Surgery.—Seaton S. Pringle, Thomas L. Sands, Demetrius Jacovides, Joseph Wallace, James T. M'Entire, William Wiley, Thomas Ff. Manning, Edward V. Collen, and John F. Nicholson.

Section A.—James G. Wallace, John Cunningham, Arthur A. M'Neight, Keith R. C. Hallowes, Wright Mitchell, John A. Sibthorpe, John H. Waterhouse, George B. M'Caul, Robert Magill, James H. Thompson, John Chambre, Charles E. Fawcett, William Hassard, Cecil A. Boyd, and Francis S. Crean

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:* Dr. Max Lewandowsky and Dr. Friedrich Umber have been recognised as *privat-docenten* of Physiology and Internal Medicine respectively.—*Berne:* Dr. Howald has been appointed to the chair of Forensic Medicine.—*Breslau:* Dr. Arthur Dienst has been recognised as *privat-docent* of Midwifery and Gynæcology.—*Erlangen:* Dr. Hermann Merkel has been recognised as *privat-docent* of Forensic Medicine.—*Gratz:* The title of Extraordinary Professor has been granted to Dr. Adolf Tobeitz, *privat-docent* of Children's Diseases.—*Kieff:* Dr. Volkovich has been appointed to the chair of Clinical Surgery in succession to Dr. Bornhaupt.—*Marburg:* Dr. Ludwig Aschoff of Göttingen has been appointed to the chair of Pathological Anatomy and General Pathology in succession to Professor Ribbert.—*Moscow:* Dr. Flëroff has been recognised as *privat-docent* of Medicine, Dr. N. Bazhënoff as *privat-docent* of Neurology and Psychiatry, and Dr. A. Starkoff as *privat-docent* of Surgery.—*Naples:* Dr. Giuseppe Boccardi, Extraordinary Professor of Histology, has been promoted to the Ordinary Professorship. Dr. Giuseppe Trotta has been recognised as *privat-docent* of Midwifery and Gynæcology.—*Prague (German University):* Professor Von Franqué of Würzburg has been appointed Professor of Midwifery in succession to the late Professor Max Sänger.—*Strasburg:* Dr. H. Jäger of Königsberg has been appointed Extraordinary Professor of Hygiene.—*Vienna:* Dr. G. Nobl has been recognised as *privat-docent* of Dermatology.

THE LATE N. C. HATHERLY, M.D. ABERD., M.R.C.S. ENG., STAFF SURGEON R.N. (RETIRED).—The funeral took place at South Molton, Devon, on Feb. 13th, of Staff-Surgeon Narcissus Collins Hatherly, who died on Feb. 10th in his eightieth year. The deceased was formerly a surgeon in the Royal Navy and for ten years—from 1852 to 1862—was senior assistant surgeon at the Royal Naval Hospital, Plymouth. Staff-Surgeon Hatherly was one of the oldest and most esteemed residents of South Molton and had been identified with practically all the works of philanthropy in the town. It was only quite recently that his portrait and an album containing the names of the subscribers were presented to him. The funeral was attended by a large number of influential residents and friends. Numerous wreaths were sent, amongst those sending them being Earl Fortescue, Viscount Ebrington, and others.

SOUTH DEVON AND EAST CORNWALL HOSPITAL.—The sixty-third annual meeting of the subscribers to this institution was held on Feb. 9th under the presidency to the Earl of Mount-Edgcumbe. The medical report stated that during 1902 the in-patients numbered 1215, a decrease of 134 as compared with the previous year. 3134 out-patients

were treated, against 2795 in 1901. 69 nurses and 258 patients were sent to the Pearn Convalescent Home. The financial statement showed that the income amounted to £7415. The expenditure for the year was £8409, leaving a deficit of £994 on the year's working.

HEALTH OF BIDEFORD RURAL DISTRICT.—Mr. J. H. Hobling in his annual report for 1902 presented at the meeting of the Bideford (Devon) rural district council held on Feb. 4th, stated that the population of the district was 6386. The birth-rate was 27·1 per 1000 and the death-rate was 8·9 per 1000. 14 deaths occurred in children under one year of age. Mr. Hobling considered that several of these were due to ignorance in feeding and at his suggestion the council decided to issue an official leaflet containing instructions as to the feeding of infants and to request the registrar to give copies of it to the parents when the birth of a child was registered.

BATH EYE INFIRMARY.—The annual meeting of the subscribers to this institution was held on Feb. 2nd, under the presidency of Mr J. S. Bartrum. The medical report stated that during 1902 the out-patients numbered 2258, being an increase of 59 as compared with 1901. 215 in-patients were admitted, against 295 in the previous year. The financial statement showed that the total income amounted to £552, and the unfavourable balance of £46 remaining at the end of 1901 had been converted into a balance in hand of £10; but that in order to effect this the committee had been obliged to reduce the number of the in-patients.

Parliamentary Intelligence.

THE SESSION OF PARLIAMENT.

THE session of Parliament was opened by the King on Tuesday, Feb. 17th, with full State ceremony. As usual His Majesty's speech gave a forecast of the legislation which the Government proposes to introduce in the course of the session. Eleven measures were mentioned, including an Education Bill for London, a measure amending and consolidating the licensing laws in Scotland, a measure for regulating the employment of children, and a measure for dealing with the sale of adulterated dairy produce. There was no reference in the speech to the Vaccination Bill, but as Mr. Chaplin's Act expires at the end of the present year it will no doubt be forthcoming in the course of the session. Another notable omission was the Lunacy Bill, which year after year has occupied a place in royal speeches. It is understood, however, that the Lord Chancellor contemplates the introduction of a Bill dealing with the laws as to lunacy.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

BLAKE, A. F., M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer for the Gravs Division of the Orsett Union.

CARR-WHITE, Major P., M.B., I.M.S., has been appointed Clinical Assistant to the Samaritan Free Hospital for Women.

CLAPHAM, Lucy B., M.B. Lond., has been appointed Assistant Anæsthetist to the New Hospital for Women, London.

DISMORE, HENRY BERTRAM, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Wroughton District by the Swindon Board of Guardians.

JARVIS, JOHN, M.R.C.S., has been appointed Surgeon to the Western Dispensary, Bath, vice Mr. John Davies, resigned.

LYELL, J. H., M.D., C.M. Glasg., has been appointed Outdoor Surgeon to the Royal Infirmary, Dundee.

PALMER, HAROLD LEWIS, M.R.C.S. Lond., L.S.A. Lond., J.P., has been appointed Honorary Consulting Surgeon to the Montgomeryshire Infirmary.

PATON, E. L., M.B., C.M. Glasg., has been appointed Visiting Surgeon to the Royal Infirmary, Dundee.

PEARSE, JAMES, M.D., C.M. Edin., has been appointed Medical Officer of Health for the Trowbridge (Wilts) Urban District Council.

SANDALL, T. E., M.B., B.S. Cantab., has been appointed Certifyfng Surgeon under the Factory Act for the Alford District of the County of Lincoln.

STIRLING, ROBERT, M.D. Edin., F.R.C.S. Eng., has been re-appointed Visiting Surgeon to the Royal Infirmary, Dundee.

TAYLOR, W., M.D. Edin., has been appointed Visiting Surgeon to the Royal Infirmary, Dundee.

WILKINS, A. G., M.B., B.S. Vict. Univ., has been appointed Certifying Surgeon under the Factory Act for the Pattordale District of the County of Westmorland.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY.—House Physician and Surgeon. Salary £120 per year, with board, apartments, and laundress.

CITY OF LONDON ASYLUM.—Second Assistant Medical Officer and Pathologist, unmarried. Salary £150 a year, with board, apartments, and washing.

CUMBERLAND INFIRMARY, Carlisle.—Resident Medical Officer.

DURHAM COUNTY ASYLUM.—Assistant Medical Officer. Salary £180 per annum, rising to £220, with rooms and attendance.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—Medical Officer for the Casualty Department for six months, renewable. Salary at rate of £100 per annum, with luncheon. Also House Surgeon for six months, with board and residence. Honorarium of £25.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—Two Physicians to Out-patients.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—House Physician, unmarried, for six months. Salary £20, with board and residence.

LONDON THROAT HOSPITAL, 204, Great Portland-street, W.—House Surgeon (non-resident). Honorarium at rate of £50 per annum.

LONDON TEMPERANCE HOSPITAL. Assistant Resident Medical Officer for six months. Honorarium at rate of 50 guineas per annum, with board and residence.

MANCHESTER OWENS COLLEGE.—Junior Demonstrator in Physiology. Stipend £100, rising to £150 per annum.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury.—House Physician. Salary £100, with board and apartments.

NEWCASTLE-ON-TYNE SCHOOL BOARD.—Two Medical Officers. One male, one female.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Bethnal Green, N.E.—Assistant Physician. Also Casualty Officer for six months. Salary £80 with lunch.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone-road, N.W.—Assistant Resident Medical Officer for four months. Salary at rate of £50 per annum, with board, residence, and washing.

ROTHERHAM HOSPITAL AND DISPENSARY.—Senior House Surgeon. Salary £110 per annum, with rooms, commons, and washing.

ROYAL EYE HOSPITAL, Southwark, S.E.—House Surgeon for six months, renewable. Salary 50 guineas per annum, with board and residence.

STAFFORDSHIRE GENERAL INFIRMARY, Stafford.—Assistant House Surgeon. Salary £80 per annum, with board, lodging, and washing.

STOCKPORT INFIRMARY.—House Surgeon. Salary at rate of £100 per annum, with board, washing, and residence.

VICTORIA CHILDREN'S HOSPITAL, Park-street, Hull.—Lady House Surgeon. Salary £50 per annum, with board and laundry. Also Lady Assistant House Surgeon. Salary £40 per annum, with board and laundry.

WARWICK UNION.—Medical Officer. Salary £140 per annum.

WEST LONDON HOSPITAL, Hammersmith-road, W.—Assistant Surgeon.

WALSALL AND DISTRICT HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with apartments, board, and laundry.

WOLVERHAMPTON EYE INFIRMARY.—House Surgeon. Salary £70 per annum, with rooms, board, and washing.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Assistant House Physician for six months. Honorarium at rate of £75 per annum, with board, lodging, and washing.

Births, Marriages, and Deaths.

BIRTHS.

BACON.—On the 10th inst., at Riverside, Bitterne Park, Southampton, the wife of Robert A. E. Bacon, M.R.C.S. Eng., L.R.C.P. Lond., of a son.

FRITH.—On Feb. 15th, at The Limes, Rickmansworth, the wife of Walter S. Frith, M.B., B.C. Cantab., of a son.

HICKS.—On Feb. 12th, at Huntingdon, the wife of Charles E. Hicks, M.R.C.S., L.R.C.P. Lond., of a son.

MARRIAGES.

CHARLESWORTH—RAM.—On February 14th, at Christchurch Cathedral, Zanzibar, Francis Charlesworth, M.B., of H.M.'s Agency, Zanzibar, to Mary Frances Jane, eldest daughter of the late Rev. George Stopford Ram, of Clonatin, County Wexford, vicar of St. Peter's, Bournemouth, and of the Hon. Mrs. Ram, of 59, Courtfield-gardens, S.W.

RICHARDSON—MCLEAN.—On Feb. 11th, at St. Paul's Church, Clifton, Bristol, by the Rev. A. H. Sewell, M.A., Hugh Richardson, M.B., C.M. Edin. (late R.A.M.C.), St. Andrews, son of the late Henry Cockburn Richardson, I.C.S., to Elizabeth, daughter of the late Patrick McLean.

DEATHS.

DIXEY.—On Feb. 13th, at his residence, Moss Hall Villa, North Finchley, Augustus Edward Dixey, M.D. St. And.

HALLIBURTON.—On Feb. 16th, at The Oaks, Grange-road, Upper Norwood, S.E., Thomas Halliburton, in his 80th year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

THE MEDICAL MAN, THE CORONER, AND THE PATHOLOGIST.

DEPUTATIONS from the staff of St. Thomas's Hospital and the practitioners in the south-western district of London were received by the public control committee of the London County Council on Feb. 13th and made a representation of the situation that has arisen out of the innovations introduced by Mr. Troutbeck into his coroner's court. The public control committee went carefully into the representations made to it and will no doubt make a report which will be presented to the Council and become public property.

The *Wandsworth Borough News* of Feb. 13th contains lengthy accounts of two inquests conducted by Mr. Troutbeck, in the course of each of which the coroner pointed out to the jury the reasons for calling upon Dr. L. Freyberger to make post-mortem examinations. As long as Mr. Troutbeck, in defence of his own innovations, misrepresents the medical profession so long we shall be compelled to re-state the true position of affairs. The first of the two inquests was upon an infant who died from rupture of a malformed heart. Mr. Troutbeck, at the Battersea coroner's court, suggested that if he had not had specially skilled assistance the jury might have been led into thinking that the child's death was due to suffocation. Dr. Freyberger could have told him what as a lawyer he is not likely to know, that no special knowledge whatever is necessary to detect such a condition post mortem, and that there may have been excellent material for diagnosing the condition while the infant was alive. In addressing the jury in this case Mr. Troutbeck is reported to have justified his action in not having subpœnaed the medical attendant on the ground of economy. But we understand that Dr. Freyberger has offered his services to the London County Council at the statutory fee of two guineas. For the same sum Mr. Troutbeck could have had the evidence dealing with the symptoms of the infant while alive and the conditions after death from the best person to describe them—viz., the medical practitioner in attendance upon the case; while for half that sum he might have obtained from the medical practitioner sufficient evidence to result in a proper verdict. We do not see in what way Mr. Troutbeck has saved any waste of public funds.

The second inquest reported in the *Wandsworth Borough News* of the same date was held at the Wandsworth Town Hall and was also upon an infant. The infant during life was attended by two medical men, one of whom, the one who had only seen the child in a dying condition, was called by the coroner. Evidence was also given as to the post-mortem conditions by Dr. Freyberger in the medical practitioner's presence and he very properly told the coroner that as a matter of fact Dr. Freyberger had not touched the body. Dr. Freyberger said that he suffered from sore hands and therefore employed the post-mortem porter, paid by the borough council, to open the body. He added that he had done the same in thousands of cases. It appeared that the attendant did not open the heart and that Dr. Freyberger arrived at his conclusions regarding this organ from external appearances. We see no harm in the porter occasionally doing the manual work, or portions of the manual work, of the investigation under Dr. Freyberger's, or preferably under the medical adviser's, eye, but think it unfortunate that Dr. Freyberger should not be in a physical condition to touch a corpse. An attendant can not take the place of a skilled pathologist: *tactus eruditus* is required to detect the friability of an organ or the density of an adhesion, &c., and no coroner ought to look for such information from an attendant, even though his wages are paid by the borough council. Why Dr. Freyberger, whose special knowledge of cardiac pathology was dwelt upon by the coroner in the previous case, made no examination of that essential organ, the heart, in this case we cannot pretend to guess. The medical practitioner who saw the child before death seems to have thought that there were grounds for believing a malformation to have been present, and certainly the heart should have been opened. Nor do we understand why of the two medical men who could have given evidence as to the symptoms before death, the one who had the shortest opportunity of so doing was subpœnaed to help the jury.

YELLOW FEVER.

IN an address delivered at the opening of the Washington Post-Graduate Medical School on Jan. 12th and published in the February number of the *Popular Science Monthly*, Surgeon-General George M. Sternberg enumerated many instances of the success of modern methods of dealing with epidemic diseases. With regard to yellow fever he said that Havana had for many years been the principal focus of infection in the West Indies and the port from which it had been repeatedly carried to the seaport cities of the United States but a great change for the better had come about during the last few years. According to the reports of the health officers in that city there had not been a case of yellow fever in Havana for more than a year, and the extinction of the disease was ascribed entirely to the vigorous measures enforced to prevent its transmission by mosquitoes of the species proved by the researches of Reed and Carroll to be the immediate hosts of the yellow fever parasite and the active agents in the transmission of the disease from man to man. During the first 60 years of the past century yellow fever prevailed almost annually in one or more of the southern seaports of the United States and not infrequently it extended its ravages to the interior towns in one or more of the southern states. So frequently did it prevail during the summer months in New Orleans and Charleston that the permanent residents of those cities commonly regarded it as a disease of the climate and as a necessary evil which it was folly to attempt to combat by quarantine restrictions. In the great epidemic of 1853 yellow fever prevailed extensively in the states of Florida, Alabama, Louisiana, Mississippi, Arkansas, and Texas. The epidemic of 1867 was limited to the states of Louisiana and Texas. Those states again suffered severely in 1873 and the states of Florida, Alabama, and Mississippi were also invaded. A still more extended and deadly epidemic occurred in 1878, causing a mortality of 15,934 out of a total number of cases exceeding 74,000. In this epidemic the disease followed the Mississippi river to the very suburbs of St. Louis, the state of Tennessee suffered severely as well as the states south of it, and the city of Memphis alone had a mortality from the disease of about 5000.

MULTIPLE GONOCOCCUS INFECTION.

DR. JOSEPH L. BOEHM of St. Louis, Missouri, has published in the January number of the *St. Louis Courier of Medicine* a case of multiple gonococcus infection occurring in a boy 16 years of age, who was admitted into hospital with granular inflammation of the conjunctiva. He had been suffering from a purulent discharge from the urethra for about four weeks, but had otherwise been in good health. Pus from his eye was found to contain the gonococcus. His temperature was 103° F. On the second day his pulse-rate was 140, there was a distinct systolic murmur at the cardiac apex, and the diagnosis of endocarditis was made. His temperature at night was 106°. Three days afterwards his left ankle-joint was painful, œdematous, and hot. Next morning the left knee was painful and fully three inches larger in circumference than the right knee. On the next day the two shoulder-joints were affected. He afterwards became delirious and so ill that a fatal issue was expected, but eventually he recovered. He was given a mixture containing guaiacol carbonate, sodium salicylate, and benzoic acid; ice-packs were applied to the head and over the heart and the joints were strapped, fluid being also aspirated from the knee-joint.

UNFORTUNATE ADVERTISEMENT.

THE following paragraph is taken from the *General Advertiser*, a Dublin newspaper, and we are requested to give an opinion upon it.

INDIGESTION.

LOSS OF APPETITE. FLATULENCY, BILIOUSNESS.

SIR C. CAMERON, M.D., reports:—"I can strongly recommend EARL'S FLUID PEPSINE as a reliable Remedy for Indigestion and Dyspepsia. It contains the digestive properties of the gastric juice in a highly concentrated, permanent, and reliable form. It causes even the toughest beef to become digested, is peculiarly suitable for invalids and young children, and is superior both in strength and efficacy to any other preparation of Pepsine." Of all Chemists and Druggists, in bottles, 1s., 3s., 5s. 6d., 10s. 6d.—Central Depôt, 12, Grafton Street.

Our view is that Sir Charles Cameron should instruct the proprietors of Earl's Fluid Pepsine to discontinue the use of his name in connexion with their wares in the lay press.

WEST INDIAN COLONIAL MEDICAL SERVICE.

M.R.C.S., L.R.C.P. is anxious to correspond with any medical man who has served in the West Indian Medical Service and who could inform him fully on the subject.

THE CHEAP PISTOL AGAIN.

A TYPICAL accident with a toy pistol formed the subject of investigation at an inquest held recently at Bromley. A lad, aged 17 years, a milk carrier, bought from one of his companions a pistol and a few cartridges for a shilling. He appears to have tested its capacity for destruction by firing it at a fence when the bullet went through a rail and into a field. A few days later he produced it from his pocket, showed it to two companions, and loaded it. His companions had left him and apparently he was replacing it in his trousers pocket when it went off, wounding him in the lower part of the abdomen. He was taken to the cottage hospital and treated without delay, but peritonitis supervened and two days after receiving the wound he died. A curious feature in the case was that he stated to Dr. H. J. Ilott, when he first examined him, that another boy shot him at a distance of five or six yards. This statement would have thrown grave and unjust suspicion upon the boys, who were both within 20 yards when the accident took place, had not the condition of the wounded lad's clothes and apron clearly pointed to the pistol having gone off in his pocket. He also, before dying, retracted his former statement and said that the pistol went off in his own hand by accident. Dr. Ilott informed the jury that in two years he had treated four wounds from such pistols as that which the deceased had owned, a weapon which is, no doubt, still in the hands of somebody at Bromley, for one of the lads said that he threw it away after the accident and it has

not been found since. The jury expressed an opinion that some restriction ought to be placed on the sale of toy pistols and cartridges, but it seems useless to hope for this. Something will no doubt be done when some conspicuous personage has been shot; until then this peculiarly useless and dangerous commerce will presumably continue unchecked.

NON-LEAKABLE FOUNTAIN PEN.

To the Editors of THE LANCET.

SIRS,—You refer in THE LANCET of Feb. 14th, p. 450, to a non-leakable fountain pen in which the principle of the closure of the reservoir by "pushing the pen up into writing position" and the arrangement by which "the cap can be replaced over the nib in such a way as both to protect the nib and to close the ink reservoir" is referred to as "something quite new." This description tallies with that of the Caw fountain pen which I and others have used for many years. It has given perfect satisfaction as a non-leakable fountain pen, differing in this respect from all other pens with which I am acquainted. I am, Sirs, yours faithfully,

Feb. 15th, 1903. JUSTITIA.

"THE PRESCRIBING QUACK."

IN THE LANCET of Feb. 7th, p. 411, we animadverted very strongly upon the conduct of Mr F. E. Bustard, M.P.S., in sending out an advertisement of a disgraceful nature. We are glad to see that our contemporary the *Pharmaceutical Journal*, in a paragraph on page 217 of the issue of Feb. 14th, agrees with our remarks, the paragraph being headed as above. Our contemporary further says that "as further action may be taken in the matter it is not desirable to comment upon the circumstances at present, but the hope may be expressed that no other registered chemist is endeavouring to extend his business by unprofessional means similar to those to which THE LANCET has very properly taken exception." It is fair to say, further, that our contemporary states that Mr. Bustard has confirmed the accuracy of our note, but that the card was withdrawn from circulation about three weeks ago. We have, moreover, received the following letter and we congratulate the Pharmaceutical Society upon its prompt action.

Pharmaceutical Society of Great Britain,
17, Bloomsbury-square, London, W.C.

To the Editors of THE LANCET.

SIRS,—I have observed the note in your issue of the 7th inst. headed "The Prescribing Quack" and have to inform you that the person therein referred to is no longer a member of this society and will not be permitted to continue to use the initials "M.P.S." I am, Sirs, yours faithfully,

Feb. 16th, 1903. R. BREMRIDGE, Secretary and Registrar.

A FORMALDEHYDE INHALER.

DR. CHOWRY MUTHU has designed a simple appliance for formaldehyde inhalation which he regards as a very important aid in the treatment of pulmonary tuberculosis. The inhaler consists of perforated zinc and is pyramidal in shape, the base resting on the chin and the apex on the nose. It is flexible so that it can be readily fitted. The following mixture is sprinkled on a pad of cotton-wool: one drachm of formalin, one drachm of chloroform, and two drachms of rectified spirit. The inhaler is light and portable and can be used at all times of the day, whether the patient is reading, writing, or walking. Dr. Chowry Muthu points out that the success of this apparatus depends on its being used constantly and perseveringly for six or seven hours a day and even at night. The inhaler is supplied by Messrs. Maw, Son, and Sons, 7, Aldersgate-street, London, E.C.

MOTOR CARS FOR MEDICAL MEN.

To the Editors of THE LANCET.

SIRS,—Perhaps some of your readers may like to hear particulars of a good second-hand steam car and also a 10-h. p. Panhard, suitable for medical men. They were built less than a year ago for a wealthy private motorist and are now privately offered for sale at a low price. Each car has been little used and can be inspected and fully tried before purchase. I am, Sirs, yours faithfully,

Feb. 16th, 1903. E. C. R.

AN APPEAL TO MEDICAL FREEMASONS.

To the Editors of THE LANCET.

SIRS,—May I ask any of my brother medical practitioners who have votes to spare for the coming election at the Royal Masonic Institution for Boys to give them to the case of C. P. Hines? His father was a young practitioner who died five years ago, leaving a widow and son very inadequately provided for. Any votes will be thankfully received by Yours faithfully,

231, Clapham-road, S.W. HEATON C. HOWARD, L.R.C.P. Lond.

P.S.—It is the last application.

Urban M.O.H.—1. It is quite usual for the official to apply for an increase of salary. 2. It does not appear to us necessary that the post should be advertised, but the clerk would be well advised to take the advice upon the matter of the Local Government Board. An advertisement of the salary proposed to be assigned appeared, of course, upon the original assignment.

H. J. W.—The preparation is probably one of papaverine and must be taken with the same precautions against the formation of a vicious habit as would be observed in prescribing morphine.

Enquirer.—To practise legally in Switzerland a Swiss qualification must, we believe, be taken after residence in that country for some considerable period of time.

Dubium.—The matter is one that must be left entirely to individual taste. There are no rules, either general or particular.

Wirral.—We do not recommend practitioners, specialists or otherwise.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (23rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.).

TUESDAY (24th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.) London Throat (9.30 A.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat Golden-square (9.30 A.M.), Soho-square (2 P.M.).

WEDNESDAY (25th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M).

THURSDAY (26th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat, (9.30 A.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

FRIDAY (27th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.).

SATURDAY (28th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (23rd).—MEDICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W.).—8 P.M. Council Meeting. 8.30 P.M. Ordinary Meeting. Papers:—Dr. J. K. Fowler: Hæmorrhagic Enteric Fever with an Account of Two Cases.—Dr. S. H. Habershon: The Causes, Diagnosis, and Treatment of Spasmodic Contraction of the Pylorus.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (20, Hanover-square, W.).—7 P.M. Council. 8 P.M. Casual Communications:—Mr. C. Robbins: A Preliminary Note on some Prehistoric Skulls.—Mr. G. Bird: A Case of a Denture impacted in Œsophagus. Paper:—Mr. J. B. Parfitt: A New Anatomical Articulator.

TUESDAY (24th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Papers:—Dr. V. Pearson: Latent Empyema in Infants.—Mr. C. W. Ensor and Dr. J. O. W. Barratt: Paroxysmal Hæmoglobinuria of Traumatic Origin.

WEDNESDAY (25th).—EPIDEMIOLOGICAL SOCIETY (11, Chandos-street, Cavendish-square, W.).—8.30 P.M. Discussion on the Panama Canal and the Introduction of Yellow Fever into Asia (opened by Dr. P. Manson, C.M.G.).

DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND (20, Hanover-square, W.).—5 P.M. Meeting.

HUNTERIAN SOCIETY (London Institution, Finsbury-circus, E.C.).—8.30 P.M. Mr. C. Lucas: The Symptoms and Diagnosis of Stone in the Kidney. (Hunterian Society.)

THURSDAY (26th).—NEUROLOGICAL SOCIETY OF THE UNITED KINGDOM (11, Chandos-street, Cavendish-square, W.).—8 P.M. Clinical Evening. Case of Myopathic Muscular Atrophy will be shown by Dr. Ascherson, Dr. Beevor, Dr. Buzzard, Dr. M. Clarke, Dr. Collier, Dr. Guthrie, Dr. Hutchison, Dr. Ormerod, Dr. Pitt, Dr. Russel, and Dr. Taylor.

FRIDAY (27th).—CLINICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8 P.M. Exhibition of Clinical Cases followed by Discussion. Patients will be in attendance from 8 P.M. to 9 P.M.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (23rd).—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Mr. J. H. Parsons: Ocular Circulation. (Arris and Gale Lecture.)

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. J. H. M. MacLeod: Clinique. (Skin.) 5.15 P.M. Mr. D. Drew: Diseases of the Breast.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. P. Dunn: Ocular Symptoms in General Diseases.

TUESDAY (24th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. J. Taylor: Clinique. (Medical.) 5.15 P.M. Mr. E. Clarke: Defects of Refraction. II.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Moullin: Anterior Displacement of the Uterus.

UNIVERSITY OF LONDON (Physiological Laboratory).—5 P.M. Dr. W. D. Halliburton: On the Chemistry of Muscle and Nerve. (Lecture on Advanced Physiology.)

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury).—3.30 P.M. Sir F. Semon: Effects of Pressure on Laryngeal Nerves.

WEDNESDAY (25th).—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Mr. J. H. Parsons: Ocular Circulation. (Arris and Gale Lecture.)

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. R. Harrison: Clinique. (Surgical.) 5.15 P.M. Mr. W. A. Lane: On Certain Abdominal Affections.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. S. Taylor: Diagnosis and Treatment of Valvular Disease of the Heart.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. B. Shaw: Diastolic Murmurs.

THURSDAY (26th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. J. Hutchinson, jun.: Clinique. (Surgical.) 5.15 P.M. Dr. P. Stewart: Postures in Hysterical Paralysis.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Keetley: On Fractures in and near the Elbow and Wrist Joints.

UNIVERSITY OF LONDON (Physiological Laboratory).—5 P.M. Dr. T. G. Brodie: On the Circulation. (Lecture on Advanced Physiology.)

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Dr. Hutchinson: Mental Deficiency in Children (lantern demonstration).

CHARING CROSS HOSPITAL.—4 P.M. Mr. Waterhouse: Demonstration of Surgical Cases. (Post-Graduate Course.)

FRIDAY (27th).—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Mr. J. H. Parsons: Ocular Circulation. (Arris and Gale Lecture.)

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. D. Grant: Clinique. (Ear.) 5.15 P.M. Mr. H. L. Barnard: Acute Appendicitis.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Reece: Some Factors of Infection.

UNIVERSITY OF LONDON (Physiological Laboratory).—5 P.M. Lecture: Dr. J. S. Macdonald (Sheffield): Nerve as a Concentration Cell. (Prof. Sherrington, Prof. Starling, Dr. Waller, and others are expected to join in the discussion.)

EDITORIAL NOTICES.

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Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index to Vol. II. of 1902, which was completed with the issue of Dec. 27th, and the Title-page to the Volume, were given in THE LANCET of Jan. 3rd.

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VOLUMES for the second half of the year 1902 are now ready. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

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(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Feb. 19th, 1903.

Date	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
Feb. 13	30·45	N.E.	...	66	49	42	41	43	Overcast
,, 14	30·14	S.W.	...	71	51	40	40	41	Cloudy
,, 15	30·01	W.	...	58	51	41	42	42	Overcast
,, 16	30·30	E.	0·01	64	46	41	39	42	Overcast
,, 17	30·60	S.W.	...	75	48	37	36	39	Hazy
,, 18	30·53	S.	...	79	50	34	34	35	Hazy
,, 19	30·32	S.W.	...	85	55	35	43	44	Fine

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